



CONTRACT DOCUMENTS
FOR
CITY OF SEDONA
WASTEWATER DEPARTMENT

SR179 Sewer Main Upsize – Phase II Project

2021-WW-01

City of Sedona
SR179 SEWER MAIN UPSIZE – PHASE II PROJECT

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ADVERTISEMENT FOR BIDS
City of Sedona
Wastewater Department
102 Roadrunner Drive
Sedona, AZ 86336

Sealed bids for the construction of the **SR179 Sewer Main Upsize – Phase II Project** will be received by the Wastewater Department, located at 7500 W. SR89A, Sedona, Arizona, until **1:00 P.M. local time, October 4, 2021.** At that time, bids will be publicly opened and read aloud in the Wastewater Conference Room. Bidders are invited, but not required, to be present at the bid opening.

PROJECT: SR179 Sewer Main Upsize – Phase II

DESCRIPTION: Phase II of this project will include the replacement of approximately 365 feet of 8-inch sanitary sewer main on State Route 179, through the Schnebly Hill Road roundabout, with 12-inch sanitary sewer main. In addition, the project includes replacement of approximately 700 feet of 12-inch sanitary sewer main located adjacent to State Route 179, under the pedestrian bridge crossing Oak Creek.

CONTRACT TIME: 45 calendar days after the Notice to Proceed.

LIQUIDATED DAMAGES: \$770 per day beyond the 45-calendar day Contract Time.

MANDATORY PRE-BID MEETINGS: Failure to attend and acknowledge attendance at mandatory pre-bid meetings shall render a bid non-responsive.

Contract Documents may be downloaded from the City of Sedona's website at <https://www.sedonaaz.gov/business/doing-business/bids-and-rfps>.

PRE-BID CONFERENCE: Virtual pre-bid conference (**mandatory**) will be held on **September 21, 2021, at 1:00 pm.** To obtain a link to the virtual meeting, a request must be made via email to RHolland@sedonaaz.gov no later than 11:00 am on September 21, 2021.

Each bidder's proposal shall be made on forms furnished in the Contract Documents, and must be accompanied by a security consisting of a certified check, cashier's check, or bid bond in an amount of not less than ten percent (10%) of the amount of the total bid amount, and made payable to the CITY OF SEDONA, ARIZONA. In the event the successful Bidder, within ten (10) calendar days after award of the Contract, fails to enter into a Contract or fails to post payment and performance bonds satisfactory to the City insuring the faithful fulfillment of the Contract as required by law, the security deposit on this bid shall be forfeited to the City.

Contract Documents, with completed Bid Proposal, must be enclosed in a sealed envelope, addressed to:

HAND DELIVERED: City of Sedona
Wastewater Department
7500 W. State Route 89A
Sedona, AZ 86336

U.S. MAIL: City of Sedona
Wastewater Department
102 Roadrunner Drive
Sedona, AZ 86336

AND MARKED: Bid Proposal for **SR179 Sewer Main Upsize – Phase II Project**

AND RECEIVED: **At the Wastewater Department until 1:00 P.M. local time, October 4, 2021** (as determined by reference to www.time.gov ref [Arizona](#) area).

The successful Bidder will be required to furnish two (2) bonds. One (1) bond, to become effective upon award of the Contract, shall be a Performance Bond substantially in the form attached, and shall be in a sum of one hundred percent (100%) of the contract price including any additions to the Contract. The Bond shall be effective throughout the construction period, including a two (2) year warranty period. The successful Bidder shall also furnish a Labor and Material Payment Bond, substantially in the form attached, to become effective upon award. Said Labor and Material Bond shall be in the amount of one hundred percent (100%) of the Contract price.

The successful Bidder will be determined on the basis of the lowest responsive and responsible Proposal. The City of Sedona, Arizona reserves the right to reject any or all Proposals, to waive or not to waive any informalities, or irregularities in the Proposals received, and to accept a Proposal, which in its judgment, best serves the interests of the City.

All questions should be directed in writing to Roxanne Holland, Director of Wastewater, 102 Roadrunner Drive, Sedona, Arizona 86336, or email RHolland@sedonaaz.gov.

FIRST ADVERTISEMENT: **September 10, 2021**

SECOND ADVERTISEMENT: **September 17, 2021**

RED ROCK NEWS

BY: _____
Roxanne Holland, PE
Director of Wastewater

INFORMATION FOR AND INSTRUCTIONS TO BIDDERS

The City of Sedona herein referred to as the "City" is defined as the City of Sedona, acting through its legally constituted officials, officers, and employees. The City may waive any informality or reject any or all bids. Any bid may be withdrawn prior to the scheduled time and date for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be opened. No Bidder may withdraw a bid within forty-five (45) days after the actual day of the opening thereof.

Bid prices shall include everything necessary for the completion of the work including but not limited to, materials, equipment, tools, other facilities, management, superintendents, labor, services, insurance, overhead, profit, and Federal, State, and Local taxes.

Each bid must be submitted on the Bid Proposal provided and must be signed by the Bidder or his duly authorized agent. All blank spaces for bid prices must be filled in, in ink or typewritten, IN BOTH WORDS AND NUMBERS where called for in the Bid Proposal. If there is a discrepancy between the price in words and the price in numbers, the price in words will govern.

In case of an error in the extension of the unit price and the total, the unit price shall govern. In the event that the product of a unit price and an estimated quantity does not equal the extended amount quoted, the unit price shall govern, and the correct product of the unit price and the estimated quantity shall be deemed to be the amount bid. If the sum of two (2) or more items in the bid schedule does not equal the total amounts quoted, the individual item amounts shall govern and the correct total shall be deemed to be the amount bid. The bid shall not contain recapitulations of the work to be done.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, Bidder's address, and the name of the project for which the bid is submitted.

The City may, by statements in the Special Provisions or other part of the specifications, require submission of sealed Bid Documentation.

The City may make such investigations as City deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. Conditional bids will not be accepted.

Bidders must correctly prepare and submit the documents listed below with their bids:

1. Bid proposal
2. Bid Guaranty Bond
3. Certification of the Bidder's experience and qualification and Statement of Bidder's Qualifications
4. List of all proposed Subcontractors
5. Schedule of manufacturers and suppliers, major equipment and material items

6. Non-collusion affidavit
7. Certificate of insurability
8. Signed Addenda

Each bid must be accompanied by either a certified check made payable to the City of Sedona, a cashier's check made payable to the City of Sedona or a bid bond, duly executed by the Bidder as principal and having as surety thereon a surety company licensed to do business in Arizona, in the amount of ten percent (10%) of the bid. The City may retain such checks or bid bonds, of the three (3) apparent lowest Bidders, for a period of forty-five (45) days after the bid opening.

Simultaneously with the delivery of the executed Contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this Contract and for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions included herein. The surety on such bond or bonds or contract bonds must file with each bond a certified and effectively dated copy of their Power of Attorney.

Each Bidder shall have listed, on the form entitled "Proposed Subcontractors", provided in the Proposal, the name, address, and description of the work of each Subcontractor to whom the Bidder proposes to sublet portions of the work in excess of one and one-half percent (1.5%) of the total amount of his Bid. For the purpose of this paragraph, a Subcontractor is defined as one who contracts with the Contractor to provide materials and labor, labor only, or who specially fabricates and installs a portion of the work or improvement according to drawings contained in the Contract Documents. Failure to list Subcontractors may render a Bid non-responsive and may be grounds for rejection of the Bid. Attention is called to the General Conditions Article 13, limiting the total amount of the work, which may be performed by Subcontractors. Alternate Subcontractors for the same work shall not be listed in the bid. However, substitute Subcontractors may be considered as long as they comply with the requirements of these Contract documents.

Subcontractors listed by the Bidder must be competent and experienced in the type of work which they are to perform. No Contractors shall be required to employ any Subcontractor, other person or organization against which he has reasonable objection.

As evidence of his competency to perform the work, Bidder shall complete and submit with his Bid the Bidder's Statement of Qualifications which is bound in the Contract Documents. Low Bidders may be asked to furnish additional data to demonstrate competency. Bidders must be, at the time of bidding and throughout the period of the Contract, licensed as required by the State of Arizona, thoroughly competent, and capable of satisfactorily constructing the Project. Bidder shall certify that he is skilled and regularly engaged in the general class and type of work called for in the Contract Documents. Additionally, Bidders shall comply with all provisions of Arizona Revised Statutes, Title 32, Chapter 10. Further, the Bidder certifies that he is knowledgeable of the unusual and peculiar hazards associated with the general class and type of work required to construct the specific project within the terms given in the Contract Documents. Bidder shall be competent and skilled in the protective measures necessary for the safe performance of the construction work with respect to such unusual and peculiar hazards.

The selected Bidder, upon Bidder's failure or refusal to execute and deliver the Contract and bonds required within ten (10) consecutive calendar days from and including the date Bidder received notice of the acceptance of his bid, shall forfeit to the City, for such failure or refusal, the security deposited with his bid.

Bidders are required prior to submitting a bid to inspect the site of the work and satisfy themselves by personal examination or by such other means as they may prefer, as to the location of the proposed work, and of the actual conditions.

Entrance by Bidders to the site of the work for purposes of making exploratory excavations shall be by special arrangement with the City Engineer under conditions established by the City. If, during the course of such an examination, a Bidder finds facts or conditions which appear to be in conflict with the Contract Documents, the Bidder must notify the City Engineer and may apply to the City Engineer, in writing, for additional information and explanation before submitting its bid.

Any information provided by the Design Engineer, the City, or any City personnel is not intended to be a substitute for, or a supplement to the independent verification by the Bidder to the extent such independent investigation of site conditions is deemed necessary or desirable by the Bidder. Bidder acknowledges that he has not relied upon City, City personnel, or Design Engineer furnished information regarding site conditions in preparing and submitting a bid hereunder. The Plans show conditions as they are believed to exist, but it is not intended nor is it to be inferred that the conditions as shown therein constitute a representation by the City or any of its officers that such conditions actually exist, nor shall the City or any of its officers be liable for any loss sustained by the Contractor as a result of any variance between any conditions as shown on the Plans and the actual conditions revealed during the progress of the project, or otherwise.

Any subsurface investigations, which may have been conducted at the site of the work, and the corresponding report, may be examined at the City office. Soil investigations, if performed, were conducted for design purposes, and the data shown in the reports are for subsurface conditions found at the time and location of the investigation. The Contractor shall note that there will be no separate payment for rock excavation and **no blasting** is permitted at the site.

The City disclaims responsibility for the interpretation by Bidders of data, such as projecting or extrapolating from the test holes to other locations on the site of the work, soil bearing values and profiles, soil stability and the presence, level and extent of underground water for subsurface conditions during construction operations.

The lands upon which the work is to be performed, right of way for access thereto, and other lands designated for use by the Contractor in performing the work are identified in the Supplemental Conditions or Drawings.

Submission of a bid by the Bidder shall constitute acknowledgement that, if awarded the Contract, the Bidder has relied and is relying on his own examination of (1) the site of the work, (2) access to the site, and (3) all other data and matters requisite to the fulfillment of the work and on his own knowledge of existing facilities on and in the vicinity of the work to be constructed under the Contract.

The Bidders shall examine carefully the Plans and Specifications and the site of the proposed Project and shall solely judge for themselves the nature and location of the work to be done and all the conditions; and the submission of a Bid shall be deemed as conclusive evidence that a Bidder has made the necessary investigation and is prima facie evidence that he is satisfied with the conditions to be encountered, quantity and quality of the work or materials to be performed or furnished, and the requirements and provisions of the Plans and Specifications and the Contract Documents. The Bidder agrees that if he is awarded the Contract he will make no claim against the City, the City Engineer, or any other City officials or City personnel based on ignorance or misunderstanding of any of the provisions of the Contract Documents, nor because of any unforeseen subsurface conditions except in the manner and under the circumstances as provided in the Contract Documents.

Each Bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

All applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction for the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any Bidder orally. Every proper request for such interpretation shall be made in writing, and to be given consideration must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instruction will be in the form of written addenda to the Contract Documents which, if issued, will be emailed to all prospective Bidders (at the respective addresses furnished for such purposes), not later than three (3) calendar days prior to the date fixed for the opening of bids. At any time prior to an announced bid opening time, the City reserves the right to issue an addendum extending the bid opening time by one (1) or more days. Failure of any Bidder to receive any such addendum or interpretation shall not relieve such Bidder from any obligations under his bid as submitted. All Addenda so issued shall become part of the Contract Documents. It shall be the responsibility of each Prospective Bidder to verify that each addendum has been received applicable to the project. Bidders are responsible to check the City website at www.sedonaaz.gov periodically to verify if new addenda have been posted and shall ensure a reliable and accurate email address is provided to the City to be added to the Plan Holder's List. In order to be added to the Plan Holder's List, a bidder submit a request from the email address intended to be used as the bidder's contact email address, to the project manager listed on page I-3.

Before submitting a Proposal, Bidders shall carefully examine the Plans, read the specifications and all other Contract Documents, visit the site of the project, and fully inform themselves as to all existing and local conditions and limitations. It is expressly stipulated that the drawings, Specifications and other Contract Documents set forth the requirements as to the nature of the work and do not purport to control the method of performing work except in those instances where the nature of the completed work is dependent upon the method of performance.

Submission of a bid shall constitute acknowledgment, upon which the City may rely that the Bidder has thoroughly examined and is familiar with the Contract Documents. Failure or neglect of a Bidder to examine any of the Contract Documents shall in no way relieve him from any obligation with respect to his bid or to the Contract. No claim for additional compensation will be allowed which is based on a lack of knowledge of the work, or of the Contract Documents.

The quantities of the various classes of work to be done and material to be furnished under this Contract, which have been estimated as stated in the Proposal, are only approximate and are to be used solely for the purpose of comparing, on a consistent basis, the Proposals offered for the work under this Contract. The Contractor agrees that the City will not be held responsible if any of the quantities shall be found incorrect; except that in the event that the Contract price may be increased or decreased in accordance with Article 30 of the General Conditions through the issuance of the appropriate change orders to reflect the actual quantities of all items constructed, installed or incorporated in the work, the Contractor will not make any further claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or misstatement is found to occur in the estimated quantities, the same shall not invalidate the Contract or release the Contractor from the execution and completion of the whole or any part of the work in accordance with the Specifications and the Plans herein mentioned, and for the prices herein agreed upon and fixed therefore, or excuse him from any of his obligations or liabilities hereunder, or entitle him to any damages or compensation except as may be provided in this Contract.

The successful Bidder, upon award of a Contract, shall commence work on the date specified in the "Notice to Proceed" and shall complete all work in accordance with the time schedule specified. Should the Contractor fail to complete all work in the allotted time period, liquidated damages shall be assessed as specified.

The City invites bids on the forms included as part of this Document to be submitted at such time and place as is stated in the Advertisement for Bids. All blanks in the Bid Proposal must be appropriately filled in with typewriter or ink. **Bidders are instructed not to turn in Bid Proposals that have been separated from the bound Contract Documents. It is the sole responsibility of the Bidder to see that the bid is received in proper time at the time and place stipulated in the Advertisement For Bids.** Any bids received after the scheduled closing time for receipt of bids will be returned to the Bidder unopened.

The bid must be signed in the name of the Bidder and must bear the signature in long hand of the person or persons duly authorized to sign the bid. Changes in or additions to the bid forms, recapitulations of the work bid upon, alternative proposals or any other modifications of the bid which are not specifically called for in the Contract Documents may be subject to City's rejection of the bid as not being responsive to the advertisements. No oral telephone modifications or telegraphic modifications of any bid submitted will be considered.

The bid submitted must not contain erasures, corrections or changes from the printed forms as completed in typewriter or ink, unless such erasures, corrections or changes are authenticated by affixing in the margin immediately opposite the erasure, correction or change, the full signature of the person who signed the bid or the signature of such other person as may be

authorized by the Bidder to make erasures, corrections or changes in the bid, and said authorization must be evidenced by written confirmation, executed by the person authorized to sign the initial bid, attached to the bid at the time of submittal.

If the bid is made by an individual, his or her name, signature, and post office address must be shown; if made by a firm or partnership, the name and post office of the firm or partnership, a list of the partners, and the signature of at least one of the general partners must be shown; if made by a corporation, the bid shall show the name of the state under the laws of which the corporation is chartered, the name and post office address of the corporation, and the title of the person who signs on behalf of the corporation. All signatures must be made in long hand. If a corporation makes the bid, a certified copy of the By-laws or resolution of the board of directors of the corporation shall be furnished showing the authority of the officer signing the bid to execute contracts on behalf of the corporation. If the bid is made by a joint venture, a representative of each of the joint venture firms shall sign the bid. Additionally, the bid shall include a copy of the resolution or agreement empowering the representative to execute the bid and bind the firm to the joint venture.

The City reserves the right to pre-qualify all bids, post-qualify all bids, or reject all bids, not to make an award or accept the Proposal deemed most advantageous and in the best interest of the City. The City shall enter into a Contract with the lowest responsible responsive bidder whose proposal is satisfactory. A written Notice of Award will be sent to the successful Bidder(s).

OR APPROVED EQUAL CLAUSE -- Manufacturers or suppliers of materials and equipment may request that alternatives to specified products be considered equal and that inclusion of such alternatives be permitted in the bids. Such request must be made in writing and received by the City Engineer at least five (5) calendar days prior to the date bids are to be received. Granting a request that an alternative product be considered equal to those specified may be made only by the issuance of an Addendum by the City. Denial of the request during bidding does not waive the manufacturer's or supplier's right to offer the alternative product to the Contractor after Award of the Contract. After Award of Contract, the offer will be considered as a substitution as provided under Article 6 of the General Conditions and will be considered only if the Engineer believes the offer of substitution is equal to or superior in quality to the specified product.

PREPARATION OF BID

- A. City reserves the right to reject any or all Bids, to waive any or all informalities, and the right to disregard all nonconforming, non-responsive or conditional Bids.
- B. City reserves the right to reject any Bid not accompanied by specified documentation and Bid security.
- C. City reserves the right to reject any Bid if it shows any omissions, alterations of form, additions not called for, conditions or qualifications, or irregularities of any kind.
- D. City reserves the right to reject any Bid that, in his sole discretion, is considered to be unreasonable as to the amount Bid for any lump sum or unit price item.

- E. A Bidder may withdraw his Bid before the time fixed for the opening of Bids by communicating his purpose in writing to the City. Upon receipt of such written notice, the unopened Bid will be returned to the Bidder.
- F. The withdrawal of a Bid does not prejudice the right of a Bidder to file a new Bid, so long as the new Bid is submitted in conformance with the Information for and Instructions to Bidders prior to the closing time indicated for Bids in the Advertisement for Proposals.
- G. No Bidder may withdraw his Bid for forty-five (45) days after the time established for receiving Bids or before the Award and execution of the Contract unless the Award is delayed for a period exceeding forty-five (45) calendar days. The Award of the Contract to one party does not constitute a waiver of this condition.
- H. In evaluating Bids, City will consider the qualifications of Bidders; whether or not the Bids comply with the prescribed requirements; the alternatives, if any; the time or times for completion as stated in the Bid Form; and the lump sum and unit prices, if requested in the Bid Form.
- I. City may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work for which the identity of Subcontractors and other persons and organizations must be submitted.
- J. City may conduct such investigation deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the work in accordance with the Contract Documents. City reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to City's satisfaction.
- K. Modification of a Bid already received will be considered only if the modification is received prior to the time established for receiving Bids. Modifications shall be made in writing, executed, and submitted in the same form and manner as the original Bid. The communication should not reveal the Bid Price, but should provide the addition or subtraction or other modifications so that the final price or terms will not be shown until the sealed Bids are opened.

CONSTRUCTION CONTRACT

THIS CONTRACT, made and entered into this ____ day of _____, 20____ by and between the City of Sedona, Arizona, an Arizona municipal corporation, hereinafter called the "City", and [Click here to enter text.](#), hereinafter called the "Contractor."

WITNESSETH:

WHEREAS, the City has caused Contract Documents to be prepared for the construction of the **(the "Project")**, City of Sedona, Arizona, as described therein; and

WHEREAS, the Contractor has offered to perform the proposed work in accordance with the terms of the Contract; and

WHEREAS, the Contractor, as will appear by reference to the minutes of the proceedings of the City Council was duly awarded the work.

NOW, THEREFORE, the parties hereto hereby stipulate, covenant and agree as follows:

1. The Contractor promises and agrees to and with the City that it shall perform everything required to be performed and shall provide and furnish all the labor, materials, necessary tools, expendable equipment, and all utility and transportation services required to perform and complete in a workmanlike manner all of the work required in connection with construction of the Project all in strict accordance with the Specifications and Drawings, including any and all Addenda, and in strict compliance with the Contractor's Proposal and all other Contract Documents, which are a part of the Contract; and the Contractor shall do everything required by this Contract and the other documents constituting a part thereof.
2. The Contractor agrees to perform all of the work described above in accordance with the Contract Documents and comply with the terms therein for the initial estimated Contract price of \$ _____, subject to increase or decrease in accordance with the Contract Documents, and the Bid Schedule set forth therein; and the City agrees to pay the Contract Prices in accordance with the Bid Schedule for the performance of the work described herein in accordance with the Contract Documents.
3. The Contractor and the City agree that the terms, conditions, and covenants of the Contract are set forth in the Contract Documents and the Plans and Technical Specifications, and the Drawings numbered _____, all defined as the Contract Documents, and by this reference made a part hereof as if fully set forth herein.
4. The Contractor and the City agree that each will be bound by all terms and conditions of all of the Plans and Technical Specifications, and Contract Documents, as if the same were fully set forth herein, and hereby incorporate all of the foregoing into this Agreement.
5. The Contractor shall abide by all the laws of the United States of America, State of Arizona, Coconino/Yavapai Counties, and the City of Sedona, including a requirement that Contractor obtain an annual Sedona Business License for every year that they do business

with Sedona or within the City limits.

6. The Contractor shall carry Workers' Compensation Insurance and require all Subcontractors to carry Workers' Compensation Insurance as required by the Law of the State of Arizona, and all other insurance as set forth in the General Conditions.
7. Contractor, its agents, employees, and subcontractors, shall not discriminate in any employment policy or practice. "Discrimination" means to exclude individuals from an opportunity or participation in any activity or to accord different or unequal treatment in the context of a similar situation to similarly situated individuals because of race, color, gender, gender identity, sexual orientation, religion, national origin or ancestry, marital status, familial status, age, disability, or veteran status. (Ordinance 2015-10 (2015)).
8. Work under this Contract shall commence on the date specified in the written Notice to Proceed from the City to the Contractor. Upon receipt of said Notice, the Contractor shall diligently and continuously prosecute and complete all work under this Contract within the time specified on page A-2.
9. The Contract Document consist of the following component parts, all of which are a part of this Contract whether herein set out verbatim, or attached hereto:

Advertisement for Bids
Information for and Instructions to Bidders
Bid Proposal and Bid Guaranty Bond
Contract (this document)
Change Orders
Addenda
Performance Bond, Labor and Material Payment Bond
Special Conditions
General Conditions
Technical Specifications
Notice of Award
Notice to Proceed
Plans and Drawings
Design Reports
Standard Specifications
Insurance Certificates
Participation in Boycott of Israel

The above named documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, the order of precedence is as follows:

1. Change Orders
2. Contract (this document), including addenda
3. Payment and Performance Bonds

4. Advertisement for Bids
5. Information for and Instructions to Bidders
6. Notice of Award
7. Notice to Proceed
8. Special Conditions
9. Bid Proposal
10. Technical Specifications
11. Plans and Drawings
12. General Conditions
13. Bid Guaranty Bond
14. Standard Specifications

In the event there is a conflict between any of the above listed documents, the provision of the document with the lower numerical value shall govern those documents with a higher numerical value. Within a category, the last in time is first in precedence.

The Contractor shall not take advantage of any apparent error or omission in the Plans or Specifications. In the event the Contractor discovers such an error or omission, he shall immediately notify the City. The City will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Plans and Specifications.

10. As part of the inducement for City to enter into this Agreement, Contractor makes the following representations:
 - A. Contractor has familiarized himself with the nature and extent of the Contract Documents, work, locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress, or performance of the work.
 - B. Contractor has studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site or those reports that otherwise may affect cost, progress or performance of the work, which were utilized by Design Engineer in the preparation of the Drawings and Specifications and which have been identified in the Contract Documents.
 - C. Contractor has made or caused to be made examinations, investigations and tests, and studies of such reports and related data as he deems necessary for the performance of the work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports or similar data are or will be required by Contractor for such purposes.
 - D. Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.
 - E. **Contractor has given the City Engineer written notice of all conflicts, errors or**

discrepancies that he has discovered in the Contract Documents and the written resolution thereof by City Engineer is acceptable to Contractor.

- F. Contractor has attended mandatory pre-bid meetings and walk-throughs.
11. A. No assignment by a party hereto of any rights under or interest in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- B. City and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, and its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
 - C. Pursuant to Arizona Revised Statutes Section 38-511, the provisions of which are incorporated by reference as if fully set forth herein, all parties are hereby given notice that this Agreement is subject to cancellation by the City if any person significantly involved in initiating, negotiating, securing, drafting, or creating the Contract or Contract Documents on behalf of the City is, at any time while the Contract or Contract Document or any extension thereof is in effect, an employee or agent of any other party to the Contract or Contract Documents in any capacity or a consultant to any other party to the Contract or Contract Documents with respect to the subject matter of the Contract or Contract Documents.
12. During the performance of this Agreement, Contractor may also be under contract with the City for performance of work on other projects. A breach in the performance of any of Contractor's obligations under this Agreement shall constitute a breach of Contractor's obligations under any other agreement with the City and the breach by Contractor under other agreement with the City shall also constitute a breach of Contractor's obligations under this Agreement. The City may offset any amounts owed by Contractor under any such other agreement from any amounts owed to Contractor under this Agreement.
13. The Contract Documents constitute the entire Agreement between the parties.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

CITY: City of Sedona, Arizona

BY: _____

NAME: _____

TITLE: _____

(SEAL)

ATTEST:

BY: _____

NAME: _____

CONTRACTOR:

BY: _____

NAME: _____

TITLE: _____

(SEAL)

ATTEST:

BY: _____

NAME: _____

APPROVED AS TO LEGAL FORM:

BY: _____

(City Attorney)

DATE: _____

STATUTORY BID BOND
PURSUANT TO TITLE 34, CHAPTER 2, ARTICLE 1
OF THE ARIZONA REVISED STATUTES

(This bond must not be less than ten percent (10%) of the bid amount)

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned _____, (hereinafter "Principal"), as Principal, and _____, a corporation organized and existing under the laws of the State of _____, with its principal offices in the City of _____, (hereinafter "Surety"), as Surety, are held and firmly bound unto the City of Sedona, the State of Arizona, (hereinafter "Obligee"), in the amount of _____ (Dollars) (\$_____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

SR179 Sewer Main Upsize – Phase II

NOW, THEREFORE, if the Obligee accepts the proposal of the Principal and the Principal enters into a contract with the Obligee in accordance with the terms of the proposal and gives the bonds and certificates of insurance as specified in the Contract Documents with good and sufficient surety for the faithful performance of the contract and for the prompt payment of labor and materials furnished in the prosecution of the contract, or in the event of the failure of the Principal to enter into the contract and give the bonds and certificates of insurance, if the Principal pays to the Obligee the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise, it remains in full force and effect provided, however, that this bond is executed pursuant to the provisions of Section 34-201, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of the section to the extent as if it were copied at length herein.

Witness our hands this _____ day of _____, 2021.

PRINCIPAL

Seal

By: _____

Title: _____

AGENCY OF RECORD

SURETY

Seal

AGENCY ADDRESS

(Attach Power of Attorney form)

STATUTORY BID BOND
(Check to accompany bid)

(Note: The following form shall be used when a check accompanies bid)

Accompanying this proposal is a Cashier's Check payable to the order of the City of Sedona hereinafter referred to as "City," for **SR179 Sewer Main Upsize – Phase II** in the amount of _____ Dollars (\$ _____), this amount being ten percent (10%) of the total amount of the Bid. The proceeds of this check shall become the property of said City provided this proposal shall be accepted by said City through action of its legally constituted contracting authorities and the undersigned shall fail to execute a contract and furnish the required Performance and Payment Bonds and proof of insurance coverage within the stipulated time; otherwise, the check shall be returned to the undersigned. The proceeds of this check shall also become the property of the City if the undersigned shall withdraw his bid within the period of forty-five (45) days after the date set for the opening thereof, unless otherwise required by law, and notwithstanding the award of the Contract to another Bidder.

Bidder

(NOTE: If the Bidder desires to use a bond instead of a check, the Bid Bond Form on the previous two (2) pages shall be executed -- the sum of this bond shall not be less than ten percent (10%) of the total amount of this Bid.)

STATUTORY PERFORMANCE BOND
PURSUANT TO TITLE 34, CHAPTER 2, ARTICLE 2,
OF THE ARIZONA REVISED STATUTES

(This Bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS:

That, _____ (hereinafter "Principal"), as Principal, and _____, a corporation organized and existing under the laws of the State of _____ with its principal office in the City of _____, (hereinafter "Surety"), as Surety, are held and firmly bound unto the City of Sedona, State of Arizona, (hereinafter "Obligee") in the amount of \$ _____ (Dollars) (\$ _____) for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the _____, dated the ____ day of _____, 2021 to

_____ which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal faithfully performs and fulfills all of the undertakings, covenants, terms conditions and agreements of the Contract during the original term of the Contract and any extension of the Contract, with or without notice to the Surety, and during the life of any guaranty required under the Contract, and also performs and fulfills all of the undertakings, covenants, terms conditions and agreements of all duly authorized modifications of the Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, the above obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the extent as if it were copied at length in this agreement.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees that may be fixed by a judge of the Court.

Witness our hands this _____ day of _____, 2021.

PRINCIPAL Seal

By: _____

Title: _____

AGENCY OF RECORD

AGENCY ADDRESS

SURETY SEAL

By: _____

(Attach Power of Attorney Form)

STATUTORY PAYMENT BOND
PURSUANT TO
TITLE 34, CHAPTER 2, ARTICLE 2,
OF THE ARIZONA REVISED STATUTES

(This Bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS:

That, _____ (hereinafter "Principal"), as Principal, and _____, a corporation organized and existing under the laws of the State of _____ with its principal office in the City of _____, (hereinafter "Surety"), as Surety, are held and firmly bound unto the City of Sedona, State of Arizona (hereinafter "Obligee") in the amount of _____ (Dollars) (\$ _____) for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee dated the _____ day of _____, 2021, _____

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal promptly pays all monies due to all persons supplying labor or materials to the Principal or the Principal's subcontractors in the prosecution of the work provided for in contract, this obligation is void. Otherwise it remains in full force and effect.

PROVIDED HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, conditions and limitations of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it were copied at length in this agreement.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees that may be fixed by a judge of the Court.

Witness our hands this _____ day of _____, 2021.

PRINCIPAL

Seal

By: _____

Title: _____

AGENCY OF RECORD

AGENCY ADDRESS

SURETY

SEAL

By: _____

(Attach Power of Attorney Form)

BID PROPOSAL

City of Sedona:

The undersigned Bidder, having examined the specifications, drawings and all other documents contained in the Contract Documents, attended all mandatory pre-bid meetings, and having examined the site where the work is being performed, and having familiarized himself with any local conditions affecting the work and having knowledge of the cost of work at the place where the work is to be done, hereby proposes to execute and perform the formal Contract set forth in these Contract Documents, of which this Proposal forms a part, and will do the work therein described on the terms and conditions therein set forth; and furnish all required labor, materials, tools, equipment, transportation and services for said work, and pay all taxes and other incidental costs, all in strict conformity with the drawings and specifications forming a part of the Contract Documents for the Unit Prices entered based on the Bidding Schedule included herein, said prices to only be amended or altered in accordance with the Contract Documents.

It is understood that any listed quantities of work to be done at unit prices are **approximate** only, and are intended to serve as a guide in evaluating bids.

It is further agreed that any quantities of work to be done at unit prices and material to be furnished may be increased or decreased as may be considered necessary, in the opinion of the City, to complete the work fully as planned and contemplated and that all quantities of work, whether increased or decreased, are to be performed at the unit prices set forth in the Bid Schedule, except as otherwise provided for in the Contract Documents.

It is further agreed that payments may be increased to cover additional work ordered by the City, but not shown on the Plans or required by the Specifications in accordance with General Condition No. 47. Similarly, payments may decrease if work is deleted or changed.

By submitting a bid, the Bidder acknowledges the understanding that the bid process is solely intended to serve the public interest in achieving the highest quality of services and goods at the lowest price, and that no right, interest, or expectation shall vest or inure to the benefit of Bidders as a result of any reliance or participation in the process.

In submitting this Proposal, it is understood that the right is reserved by the City to reject any or all Proposals and waive informalities or irregularities in Proposals. The City also reserves the right to delay the award of a contract for a period not to exceed forty-five (45) days from the date of the opening of bids.

The undersigned Bidder further agrees, if awarded the contract for the work included in this Proposal, to begin and to complete and deliver the work contemplated in accordance with all the conditions set forth in the Contract Documents.

The undersigned Bidder has carefully checked the figures inserted by him and understands that they are the Bidder's sole responsibility, and the City will not be responsible for any errors or omissions on the part of the undersigned Bidder in preparing this Proposal although City may check and correct mathematical accuracy in evaluation of the bids.

The undersigned Bidder certifies that this Proposal is genuine, not collusive, or made in the interest or behalf of any person not named as provided in the Information for and Instructions to Bidders, and that the undersigned has not, directly, or indirectly, induced or solicited any other Bidder, or induced any other person, firm, or corporation to refrain from submitting a proposal, and the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other Bidder.

Attached is a certified check without endorsement and with conditions payable to the City of Sedona in the sum of ten percent (10%) of the total bid drawn on a bank which is a member of Federal Reserve System or which is a member of the Federal Deposit Insurance Corporation, or a cashier's check for ten percent (10%) of the total bid or a Bid Bond written by an approved surety company for ten percent (10%) of the total bid.

The undersigned submits a bid bond pursuant to Section 34-201, Arizona Revised Statutes, payable to the City, equal to ten percent (10%) of the total amount of this proposal, and agrees that said bid bond shall be given as a guarantee that the Bidder will enter into the Contract within the time herein stated if the award is made to him by the City. In case of the Bidder's refusal or failure to do so within ten (10) days of Notice of the Award of Contract, or within five (5) days after receiving notice from the City of the rejection of any objections to the Notice of Award, the bond will be forfeited.

The Bidder grants the City the right to hold the lowest three (3) Proposals received, together with the accompanying bid securities, for a period of forty-five (45) days after the date of opening of said Proposals.

The undersigned Bidder further grants the City the right to award this Contract on the basis of any possible combinations of Base Bid and add/deduct alternate(s) (if any) that best suits the City's needs.

Bidder agrees that the City has determined that a reasonable time for the **SR179 Sewer Main Upsize – Phase II Project** is the contract time stated in the Advertisement for Bids and issued addendum. The Bidder agrees that this proposal is submitted on this basis, subject to provisions contained in the Contract Documents relating to extensions of time, and agrees to plan and prosecute the work with such diligence that the work shall be completed within the time specified.

Bidder agrees that the bid includes the following items which have been completed in full by the Bidder:

- (a) Bid or Proposal
- (b) Bid Schedule

- (c) Bid Guaranty Bond
- (d) Certification of the Bidder's experience and qualifications and statement of Bidder's Qualifications
- (e) List of all proposed Subcontractors
- (f) Schedule of manufacturers and suppliers, major equipment and material items
- (g) Non-collusion Affidavit
- (h) Certificate of Insurability
- (i) Signed Addenda

Bidder agrees that the City assumes no responsibility for any understanding or representation made by any of its Council members, officers or agents during or prior to the bidding and execution of the Contract, unless (1) such understanding or representations are expressly stated in the Contract or Addenda thereto, or (2) the Contract expressly provides that responsibility therefore is assumed by the City, or (3) said understanding or representation is contained in the information supplied to Bidders by the City or the City Engineer, or as information distributed pursuant to the Information for and Instructions to Bidders. The Bidder further understands that only the Mayor and Council of the City through action taken at a properly noticed meeting, can waive any term or condition or requirement of this Contract or of the bid.

Bidder agrees that all terms set forth in the Information for and Instructions to Bidders as well as all other Contract Documents shall be binding upon the Bidder if a Notice of Award is issued in favor of said Bidder by the City.

Bidder agrees that all major equipment and suppliers shall be set forth herein on the attached "Schedule of Manufacturers and Suppliers, Major Equipment and Material Items",

Bidder understands that this project is to be constructed in compliance with all City, State and Federal laws, rules and regulations, which are applicable to the project and the Contractor and all work performed hereunder.

In making this proposal, the undersigned incorporates and acknowledges all definitions set forth in the Contract Documents.

The undersigned hereby submits this proposal and the accompanying Bid Schedule as its proposal to construct the improvements described in the Contract Documents.

The name and location of the place of business of each Subcontractor who will perform work or labor or render service to the general Contractor in or about the construction of the work or improvements in an amount in excess of one and one-half percent (1.5%) of the general Contractor's total Bid, and the portion of the work which will be done by each Subcontractor is set forth in the Proposed Subcontractor list attached hereto.

Bidder has received all Addenda before submission of Bid, and has examined the same and has included them in the Contract Documents prior to submitting the Bid and has submitted the Bid based upon them.

The Bonding company which will supply the required Performance and Payment bond is:

Bid Schedule

City of Sedona – SR179 Sewer Main Upsize – Phase II
Project # 2021-WW-01

ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
1	MOBILIZATION	1	LS		
2	SAWCUT & REMOVE EXISTING PAVEMENT	165	SY		
3	REMOVE EXISTING 8" SANITARY SEWER PIPE (SR179)	363	LF		
4	REMOVE & REPLACE EXISTING CURB & GUTTER	222	LF		
5	REMOVE & REPLACE LANDSCAPING IN KIND	100	SF		
6	REMOVE EXISTING SIDEWALL	1,796	SF		
7	REMOVE EXISTING MANHOLE	1	EA		
8	REMOVE EXISTING 12" SANITARY SEWER PIPE FROM EXISTING 18" CASING (BRIDGE)	155	LF		
9	REPLACE ASPHALT PAVEMENT SECTION IN KIND PER DETAIL D, SHEET DT3	165	SY		
10	VERTICAL CURB & GUTTER (TYPE A) PER MAG STD DETAIL 220-1 WITH 3" OF ADOT CLASS II ABC	222	LF		
11	CONCRETE SIDEWALK PER ADOT STD DETAIL C-05.20. COLOR TO BE SEDONA RED	1,796	SF		
12	2" MILL AND REPLACEMENT. ASPHALT SHALL BE PER ADOT 409 AGGR SPECS, SEE DETAIL D, SHEET DT3.	690	SY		
13	CORE EXISTING CONCRETE MANHOLE, CONNECT PROPOSED SEWER PIPE TO EXISTING MANHOLE & GROUT PER SPECS	1	EA		
14	REHABILITATE AND COAT EXISTING MANHOLE	1	EA		
15	INSTALL 12" SANITARY SEWER PIPE (C900 PVC). TRENCH & BACKFILL PER MAG STD SPEC 601 & PER DETAIL 4, SHEET DT2. TRACER WIRE PER DETAIL 3, SHEET DT2	363	LF		
16	CONNECT EXISTING SERVICE TAP TO PROPOSED SEWER PIPE PER MAG STD DETAIL 440-1, TYPE A	1	EA		
17	INSTALL 12" SANITARY SEWER PIPE (C900 PVC) IN EXISTING 18" DIP CASING PIPE. INSTALLATION PER CARRIER PIPE DETAIL 2, SHEET DT1 & PER MANUFACTURER'S SPECIFICATIONS	155	LF		
18	3" FIBER OPTIC CONDUIT, SHARED TRENCH PER DETAIL4, SHEET DT2	300	LF		
19	#7 PULL BOX PER ADOT STD DETAIL FM-2.06	1	EA		
20	SEWER BYPASS WITH REDUNDANCY & 24-HOUR WATCH	1	LS		
21	SWPPP	1	LS		
22	SEAL COAT & STRIPING – GARLAND'S PARKING LOT	1	LS		

23	ADOT PERMITTING	1	LS		
24	TRAFFIC CONTROL	1	LS		
25	DEMOBILIZATION	1	LS		
TOTAL BID					
CIP: COMPLETE IN PLACE					
Owner reserves the right to vary the quantities shown at their discretion. The contractor will accept the quantities if no corrections are made at the conclusion of the pre-bid meeting. All facilities incidental to the item are included in the unit price estimate. Bid Prices submitted include all local, state and federal taxes.					

UNIT PRICES SHALL BE USED WHEN EXTENSION OF UNIT PRICES AND TOTAL AMOUNT CONFLICT. WRITTEN UNIT PRICES SHALL BE USED WHEN WRITTEN AND NUMERICAL UNIT PRICES CONFLICT. BID PRICES SUBMITTED INCLUDE ALL LOCAL, STATE AND FEDERAL TAXES.

The City of Sedona reserves the right to reject all bids, or to award only the base bid, or to award a bid based upon the total of the Base Bid plus additive alternate(s) as selected for award from the additive alternate bid schedule, if additive alternate bid schedule is applicable.

The undersigned is licensed in accordance with the Laws of the State of Arizona:

License Number _____ Class _____

NOW: In compliance with the Notice Inviting Bids and all the provisions hereinbefore and after stipulated, the undersigned, with full cognizance thereof, hereby proposes to perform the Work for the prices set forth in the preceding Schedule(s) upon which award of contract is made.

Individual Contractor Name: _____
Address: _____

Partnership Name: _____
Business Address: _____
By: _____, Partner
Other Partners: _____

Corporation Name: _____
Business Address: _____
By: _____, President
_____, Secretary

Organized under the Laws of the State of _____

Date: _____ Contractor: _____

(SEAL) By: _____

The undersigned Bidder acknowledges receipt of the following addendum:

Addendum #	Dated	Initial
_____	_____	_____
_____	_____	_____

Signature of Bidder

WORKMEN'S COMPENSATION INSURANCE
CERTIFICATE

I am aware of the provisions of Arizona Law, which require every employer to be insured against liability for workmen's compensation in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Date: _____

By: _____

NON-COLLUSION AFFIDAVIT

(Continued)

Name of Business

By

Title

Subscribed and sworn to before me this _____ day of _____, 2021.

(Notary Public)

My Commission expires: _____

STATEMENT OF BIDDER'S QUALIFICATIONS

If bidder is a corporation, answer the following:

- (a) Date of incorporation: _____
- (b) State of incorporation: _____
- (c) President's name: _____
- (d) Vice President's name(s): _____
- (e) Secretary's or Clerk's name: _____
- (f) Treasurer's name: _____

If bidder is a partnership, answer the following:

- (a) Date of organization: _____
- (b) Name and address of all partners. State whether it is a general or limited partnership:

If other than a corporation or partnership, describe the organization and name principals:

Major Types of Work Done by Company: _____

Principal Office: _____

Telephone Number: _____

Contractor's Bank and Local Contact: _____

EXPERIENCE QUESTIONNAIRE

1. How many years has your organization been in business as a contractor under your present business name?

2. How many years' experience in the proposed type and size of construction work has your organization had:

(a) As a general contractor? _____

(b) As a subcontractor? _____

3. Are you licensed as a General Engineering contractor, or any other title?

If "yes", in what city, county and state? _____

What class license and number? _____

4. List the most recent projects your organization has had in construction of work similar in type and size to the work proposed herein:

<u>Contract</u> <u>Amount</u>	<u>Class of</u> <u>Work</u>	<u>When</u> <u>Completed</u>	<u>Name, Address and</u> <u>Telephone No. of City</u>
----------------------------------	--------------------------------	---------------------------------	--

5. Has any construction contract to which you have been a party been terminated by the owner; have you ever terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work

in its own name or financed such completion on your behalf; has any surety extended any monies in connection with the contract for which they furnished a bond on your behalf? If the answer to any portion of this question is “yes”, please furnish details of all such occurrences including the name of the owner, architect or engineer, and surety, name and date of project.

- YES NO

6. Has any officer or partner of your organization ever been an officer or partner of another organization that had any construction contract terminated by the owner; terminated work on a project prior to its completion for any reason; had any surety which issued a performance bond complete the work in its own name or finance such completion; or had any surety expend any monies in connection with the contract for which they furnished a bond? If the answer to any portion of this question is “yes”, please furnish details of all such occurrences including name of owner, architect or engineer, and surety, name and date of project.

- YES NO

7. What is the underground utility experience of the principal individuals of your organization?

Individual's Name	Yrs Exp with this Company	Present Position or Office	Years of Construction Experience	Magnitude & Type of Work	In What Capacity

8. How many sanitary sewer replacements/upsizing projects has your company, or the sub-contractor responsible for this work, completed in the past 10-years? (This does not include an individual’s experience, separate from the company’s experience; an individual’s experience should be listed in their resume, if provided. **List a minimum of 6 projects.**)

NO.	Project Name	Owner	Contact	Contact Phone	Amount
1					
2					
3					
4					
5					
6					

9. How many projects in ADOT right-of-way has your company , or the sub-contractor responsible for this work, completed in the past 10-years? (This does not include an individual's experience, separate from the company's experience; an individual's experience should be listed in their resume, if provided. **List a minimum of 6 projects.**)

NO.	Project Name	Owner	Contact	Contact Phone	Amount
1					
2					
3					
4					
5					
6					

10. How many municipal projects, has your company completed in the past 10-years? (This does not include an individual's experience, separate from the company's experience; an individual's experience should be listed in their resume, if provided. **List a minimum of 6 projects.**)

NO.	Project Name	Owner	Contact	Contact Phone	Amount
1					
2					
3					
4					
5					
6					

CONTRACTOR'S FINANCIAL STATEMENT

1. Submit the most recent financial statements, including the Balance Sheet, Income Statement, sources and uses of funds, notes to the financial statement, and the auditor's opinion, that cover the most recent twelve (12) month period. These statements must have been audited by a Certified Public Accountant. However, if the prospective bidder has previously performed satisfactory work according to the City of Sedona's Engineering Department, unaudited financial statements may be allowed.

Financial statements must be submitted on an accrual basis, in a form which clearly indicates the bidder's assets, liabilities, and net worth.

2. Also submit the most recent unaudited financial statements subsequent to number 1 above.

(Financial statements shall be required of and submitted by the apparent low bidder within two (2) days after the bid opening)

CERTIFICATE OF INSURABILITY

I hereby certify that as Bidder to the City of Sedona, Arizona, _____ project, I am fully aware of the requirements of the City insurance requirements for contractors and that by submitting this bid proposal, assure the City that I am able to produce the required minimum insurance coverage should I be selected to be the successful Bidder.

Should I be selected to be the successful Bidder and then become unable to produce the insurance coverage within ten (10) days of receipt of the Notice of Award, I understand that my bid will be rejected and that I will forfeit my bid bond.

By: _____ Date: _____

Title: _____

SPECIAL CONDITIONS

General

Work shall be in accordance with Uniform Standard Specifications for Public Works Construction, distributed by Maricopa Association of Governments, latest edition (MAG), except to the extent that these specifications specify other procedures, processes, forms, materials, details, or other direction regarding the work, and as required to comply with local ordinances and regulations.

Whenever the term County is used it shall be held to mean the City of Sedona. Whenever the term County Engineer is used it shall be held to refer to the City Engineer.

Electrical work shall be subject to inspection by the City of Sedona Building Safety Division and compliance with its requirements.

General Provisions

The General Conditions and Specifications shall be considered as immediately following the Special Conditions in Order of Precedence and are part of the Contract documents.

1. Project Sign

The Contractor shall install one project sign. The sign shall identify the project and the City of Sedona as the Project owner, and provide a contact person for both the City and the Contractor. The sign shall be securely mounted and placed so that the bottom of the sign does not impede vehicular or pedestrian traffic flow or otherwise become a safety concern. The Contractor shall provide the project sign for the duration of the on-site work on the project. Payment of more than 75% of mobilization shall not be payable until the sign is in place. Failure to maintain the sign erect and in legible condition may result in up to a deduction from the contract payment equal to 0.25% for each time a written notice regarding improper sign maintenance is issued by the Engineer.

The required sign shall be mounted at a location within the project limits visible to the public as it enters or moves adjacent to the project area. The Contractor shall locate the sign in a location mutually agreeable to the Project Engineer and the Contractor within the project area. The sign shall be constructed per the Project Construction Sign Detail included at the end of the Special Conditions section. Compensation for this item shall be considered as included in the price for bid item "Mobilization". The Contractor shall present the sign design as a project submittal. The Percent Complete Bar shall be filled in as the project progresses in accordance with Article 6 of the General Conditions.

2. Public Convenience and Safety

Within the City of Sedona public convenience and safety are matters to which the Contractor is expected to devote attention to at all times during the project. The Contractor shall minimize

disruption of normal vehicular and pedestrian traffic patterns and routes, the disruption of normal property services such as, but not limited to, mail delivery and garbage pick-up. Failure in making these provisions shall subject the Contractor to deductions from payments due under the contract as determined by the City Engineer.

3. Start of Construction

Construction shall not begin until the Contractor has at a minimum provided the following:

- A traffic control plan that has been approved by ADOT
- A bypass pumping plan that has been approved by the Director of Wastewater
- The Storm Water Pollution Control Plan provisions are in place per the SWPPP in the Civil Plans
- The contractor shall have a City of Sedona NOI for storm water pollution prevention
- A minimum of 2 working days written notice delivered to property owners, residents, and HOA President within and 300 feet adjacent to the work area. The notice shall state the Contractor's contact information, brief description of the project, and the project's anticipated start date
- Survey stakes and marks have been placed in the field to accommodate at least two weeks construction work and survey notes have been provided to the City as per the project specifications
- The Project Sign has been posted
- Equipment Rate Submittal as required by Section 47.D.3 of the General Conditions
- A complete project schedule as required by the General Conditions of the Special Conditions

This provision shall not require that the City of Sedona refrain from issuing a notice to proceed or require an extension of time to accommodate Contractor compliance with it.

4. Project Control

- The horizontal and vertical control for this project is shown on the civil drawings
- The benchmarks for this project are indicated on the civil drawings
- The Contractor shall be responsible for all survey on the project **see Section 15 of the General Conditions.**

5. Submittals

In addition to the submittals called for in the Technical Specifications and General Conditions, additional submittals are required for the following items: shoring plan, sewer pipe, manholes, concrete mix design, asphalt mix design, metal fabrications, project sign, traffic control plan, sewer bypass pumping plan, emergency response plan, and equipment rental rates for all equipment to be utilized for the project (as required by Section 47.D.3 of the General Conditions).

6. Various items of Work

The Contractor shall provide the City reasonable and timely notice in writing prior to exceeding quantities established in the Bid Schedule. Failure to notify the City in a timely manner prior to exceeding the contractual quantities identified in the Bid Schedule shall be sufficient reason for the City to deny such claim.

Roadway specifications shall conform (or comport with City Code Sections...) to City Code Sections 12.05.110 and 12.05.120.

Clearing and grubbing shall be subject to MAG specification Section 201 and full compensation shall be considered as provided in bid item "Mobilization". No separate payment shall be made for trees.

It is the contractor's responsibility to comply with the ADA, specifically the requirements of ADAAG, even if the project plans show an item to not meet the requirements of ADAAG.

The City of Sedona reserves the right to request a schedule of values for any of the lump sum bid items.

All guarantees shall be per Section 51 of the General Conditions.

If it is determined that import or export of earthen material in excess of 40 cubic yards (combined total) is needed, a Haul Plan shall be provided to the City Engineer. At least 5 city working days prior to the placement of fill or excavated material from a grading project within the city on other properties located within the city, Engineering Services shall be notified in writing of the intent to place the material on other property. This requirement shall apply when the total amount of material placed on other properties within the city exceeds 40 cubic yards or if the other property on which the fill is to be placed is located within 0.75 miles of Oak Creek, or lies within a city designated flood plain. The City Engineer may approve or deny permission to place such material.

The contractor shall provide copies of all required testing to Engineering Services.

The City reserves the right to require that payment requests be submitted in a format it approves.

The City may require information as necessary to verify proper work eligibility of persons, subcontractor, or others providing labor, equipment, material or services to this project. This may include but is not limited to social security numbers, driver's license numbers, and evidence of age or citizenship.

7. Permits

The Contractor shall be responsible for obtaining permits bearing on the work and adhere to provisions of said permits. The Contractor shall also adhere to requirements of Homeowner Associations or similar organizations when establishing equipment, storage or other yards within

subdivisions. Evidence of such adherence shall be provided in writing, if requested by the City.

8. Utility Relocation

It shall be the responsibility of the Contractor to arrange and coordinate the relocation of any utilities found to be in conflict with the work. Utility relocation costs not identified as a bid item in the contract will be the City's responsibility.

9. Local Drainage

The Contractor shall reconstruct roadways, driveways, sidewalks, ditches and other surfaces at elevations that will ensure the drainage is improved or unchanged from the existing pre-construction conditions.

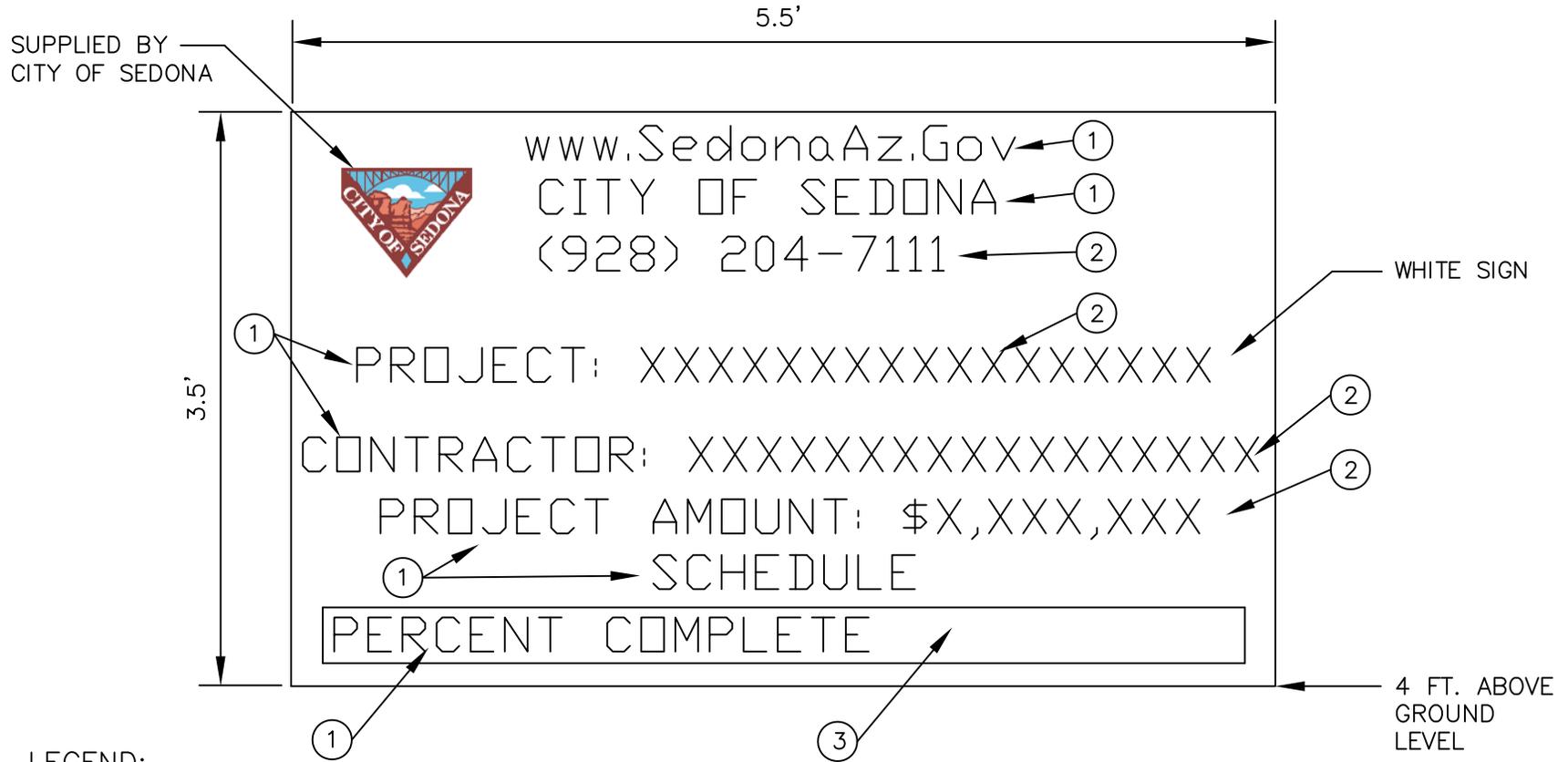
The Contractor shall manage any upstream flows during construction to maintain continuous conveyance and historic flow patterns through the project area.

10. Required Inspection

Work requiring inspection includes the following: testing, asphalt preparation and placement, cleanup, rebar inspection, traffic control setup and removal, trench bedding placement and backfill compaction, pipe placement, bypass pumping setup and removal, and concrete formwork prior to pouring concrete.

11. Bypass Pumping

Contractor shall be responsible for bypass pumping. It is likely that two separate bypass plans will be needed – one for the work in SR179 and one for the work under the pedestrian bridge. Each plan shall include, at a minimum, the following: pumps adequate to accommodate peak flows of 800 GPM with 100% redundancy, temporary piping, spill containment to prevent incidental spills, sound attenuation, 24-hour manned pump watch (when bypass pumping is active) with hourly pump checks documented on a check sheet, and automatic call out for pump failures.



LEGEND:

- ① - 3" BLACK LETTERING
- ② - 3" BLUE LETTERING
- ③ - WHITE WITH RED INDICATOR

SCALE: N.T.S.

DWG FullPath: L:\Sedona Standard Details\07.dwg Plot Date/Time: 01/31/18 09:06am

SPECIAL DETAIL NO. 07	CHECK WITH CITY ENGINEER FOR UPDATES	PROJECT CONSTRUCTION SIGN	SPECIAL DETAIL NO. 07
--------------------------	--------------------------------------	---------------------------	--------------------------

NOTICE OF AWARD

Date

Contractor Name.
Street or PO Box
City, State Zip

SUBJECT: NOTICE OF AWARD – SR179 SEWER MAIN UPSIZE – PHASE II

The City of Sedona, having duly considered the bid submitted on _____, 2021 for the City of Sedona _____ as outlined in the Contract Documents and detailed on the drawings, and it appearing that your proposal for performing the work is fair, equitable, and in the City’s best interest, and the bid includes price for work in the bid schedule in the estimated total amount of \$ _____ said bid is hereby accepted at the prices contained therein, and in accordance with all provisions set forth in the Contract Documents.

In accordance with the terms of the Contract Documents, you are required to execute the formal Contract and furnish the required Performance and Payment Bonds within ten (10) consecutive calendar days from and including the date of receipt of this Notice.

In addition, you are requested to furnish at the same time, the required Owner's protective liability and property damage insurance policy, and certificates of insurance in triplicate evidencing compliance with the other requirements for insurance stated in the Contract Documents. Your certificates of insurance shall be accompanied by a letter from your insurance company stating that the insurance certificate meets the entire requirements of the specifications, or shall state and describe specific exclusions.

The Bid Bond submitted with your proposal will be retained until the Contract has been executed and the required Performance and Payment Bonds have been furnished and approved. In the event that you should fail to execute the Contract or furnish the Performance and Payment Bonds within the time limit specified, the City, at its discretion, may cash the Bid Bond and proceed with steps that are in the City's best interest.

RECEIVED AND ACCEPTED:

CITY OF SEDONA, ARIZONA

Contractor

Sincerely,

By:

Name: _____

Roxanne Holland, PE

Date: _____

Director of Wastewater

Enclosures (3) contracts

JAD/clp

cc: City Manager

NOTICE TO PROCEED

Date

Contractor Name.
Street or PO Box
City, State Zip

Attention:

Subject: **NOTICE TO PROCEED - SR179 SEWER MAIN UPSIZE – PHASE II**

You are hereby authorized to proceed with work effective _____, 2021 and fully complete all work within _____ consecutive days from this date. The completion date for this Project is therefore _____, 2021. Liquidated damages of \$ **770** per day are applicable for each day past _____, 2021 for which work on this Project is not complete, unless an adjustment is authorized by a change order. Please acknowledge your receipt of this letter and agreement with the terms stated by signing in the space provided and returning to the City for our files.

CITY OF SEDONA, ARIZONA

By: _____
Roxanne Holland, PE
Director of Wastewater

Date: _____

Receipt Acknowledged:

By: _____

Date: _____



City of Sedona Wastewater Department

Mail: 102 Roadrunner Drive Sedona, AZ 86336

Site: 7500 W. SR 89A Sedona, AZ 86336

(928) 204-2234 Fax: (928) 204-7137

Wastewater Department

Change Order

This change order is not effective unless signed by the City Manager of the City of Sedona or his properly designated representative. Section 47 of the Contract General Conditions shall apply.

THIS CHANGE ORDER CONSTITUTES FULL, FINAL AND COMPLETE COMPENSATION TO THE CONTRACTOR FOR ALL COSTS, EXPENSES, OVERHEAD, PROFIT, AND ANY DAMAGES OF EVERY KIND THAT THE CONTRACTOR MAY INCUR IN CONNECTION WITH THE WORK DESCRIBED IN THIS CHANGE ORDER, INCLUDING ANY IMPACT ON THE DESCRIBED WORK OR ON ANY OTHER WORK UNDER THE CONTRACT, ANY CHANGES IN THE SEQUENCES OF ANY WORK, ANY DELAY TO ANY WORK, ANY DISRUPTION OF ANY WORK, ANY RESCHEDULING OF ANY WORK, AND ANY OTHER EFFECT ON ANY OF THE WORK UNDER THIS CONTRACT. BY THE EXECUTION OF THIS CHANGE ORDER, THE CONTRACTOR ACCEPTS THE CONTRACT PRICE CHANGE AND THE CONTRACT COMPLETION DATE CHANGE, IF ANY, AND EXPRESSLY WAIVES ANY CLAIMS FOR ANY ADDITIONAL COMPENSATION, DAMAGES OR TIME EXTENSIONS, IN CONNECTION WITH THE DESCRIBED WORK.

CHANGE ORDER NUMBER:		DATE:	
PROJECT:	SR179 SEWER MAIN UPSIZE - PHASE II		
CONTRACTOR NAME:			
REASON FOR CHANGE:			

Plan Sheet #'s affected by this change: _____

Specification Sections upon which Change Order is based: _____

Change requested by (check one): City Contractor Both

Contract time adjustment: 0 Calendar Days

This contract change order x increases the maximum estimated contract compensation per Article 6 contract adjustment as follows:
 decreases the maximum estimated contract compensation per Article 6 contract adjustment as follows:

\$0.00	+ \$0.00	+ \$0.00	+ \$0.00	= \$0.00
Method A	+ Method B	+ Method C	+ Method D	= Total Cost Adjustment

Contract Compensation:		Contract Time:	
Original Contract Amount	\$0.00	Original Contract Time (days)	45
This Change Order	\$0.00	This Change Order (days)	0
All Previous Change Orders	\$0.00	All Previous Change Orders (days)	
Total Maximum Compensation	\$0.00	Total Maximum Contract Time (days)	45

CONTRACTOR ACCEPTANCE	CITY OF SEDONA - WASTEWATER DEPARTMENT APPROVED
BY: _____	BY: _____
DATE: _____	DATE: _____

CITY OF SEDONA - CITY MANAGER APPROVAL

BY: _____

DATE: _____

Attach a more complete description of the change and supporting documentation to this form.

General Conditions

2021

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GENERAL CONDITIONS

1. CONTENTS

The following Contract Provisions are general in scope and may refer to conditions, which will not be encountered in the performance of the work, included in this Contract and which are not applicable thereto. Any requirements, provisions or other stipulation of these General Conditions, which pertain to a non-applicable condition, shall be excluded from the scope of the Contract. Where conflict appears, "Special Condition" shall take precedence over "General Conditions". Full compensation for compliance with these General Conditions shall be considered as included in the total and various bid items of the contract and the contract time.

2. DEFINITIONS AND TERMS

When the Contract indicates that work shall be "accepted, acceptable, approve, authorized, condemned, considered necessary, contemplated, deemed necessary, designated, determined, directed, disapproved, established, given, indicated, insufficient interpreted, ordered, permitted, rejected, required, reserved, satisfactory, specified sufficient, suitable, suspended, unacceptable, unsatisfactory," it shall be understood that these expressions are followed by the words "by the City of Sedona".

Wherever the following abbreviations, terms, or pronouns are used in the specifications, plans, or other Contract Documents, the intent and meaning shall be interpreted as follows:

ABBREVIATIONS

AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADOT	Arizona Department of Transportation
AGC	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ANSI	American National Standards Institute, Inc.
ARA	American Railway Association
AREA	American Railway Engineering Association
ARTBA	American Road and Transportation Builders Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATSSA	American Traffic Safety Services Association
A WG	American Wire Gauge
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute

EIA	Electric Industries Association
FHWA	Federal Highway Administration, Department of Transportation
FSS	Federal Specifications and Standards
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IMSA	International Municipal Signal Association
IPCEA	Insulated Power Cable Engineers Association
ITE	Institute of Transportation Engineers
MAG	Maricopa Association of Governments
MIL	Military Specifications
MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
NIST	National Institute of Standards and Technology
NSF	National Sanitation Foundation (NSF)
SAE	Society of Automotive Engineers
UL	Underwriters Laboratories, Inc.

ADVERTISEMENT - A public announcement inviting proposals for work to be performed or materials to be furnished.

AWARD - The acceptance by the City of a proposal.

BASIS OF PAYMENT - The terms under which "work" is paid, as a designated pay item in accordance with the quantity measured and the pay unit.

BIDDER - Any individual, partnership, joint venture, firm or corporation submitting a proposal for the advertised work, acting directly or through a duly authorized representative.

CALENDAR DAY - Each and every day shown on the calendar, beginning and ending at midnight.

CERTIFIED INVOICE - An invoice from a supplier which has been reliably endorsed by the Contractor guaranteeing that the material was purchased and received for the project and establishing the value of the material.

CLAIM - A written demand or request for additional compensation or additional time submitted to the Engineer that:

- A. Contains the words "This is a claim...", within its Subject line or the first paragraph
- B. Cites the contractual basis for the demand or request
- C. Relates the Contractual basis cited to factual events occurring or that have occurred within the project.

COMPLETION DATE - The date on which the contract work is specified to be completed

CONTRACT ITEM (PAY ITEM) - A specifically named unit of work for which a price is provided in the Contract. The description, whether general or detailed, the content of the named unit of work shall be as per the project plans and specifications.

CONTRACT CHANGE ORDER - A written order issued to the Contractor by the City covering extra work, additions or alterations to the plans and specifications, and establishing the basis of payment and time adjustment for the work affected by the changes. The Contract Change Order is the only method authorized for changing the Contract.

CONTRACT DOCUMENTS - The following comprise the Contract Documents: Advertisement for Bids, Information for and Instructions to Bidders, Bid Proposal and Bid Guarantee Bond, Construction Contract, Change Orders, Addenda, Performance Bond, Labor and Material Payment Bond, Special Conditions, General Conditions, Technical Specifications, Notice of Award, Notice to Proceed, Drawings, Plans, Standard Specifications and Certificate of insurability. All of these documents together constitute the **CONTRACT**.

CONTRACT TIME - The number of calendar days allowed for the entire completion of the Contract, including authorized time extensions and work required to be complete after substantial completion. Where a calendar date of completion is specified, the Contract shall be completed on or before that date.

CONTRACTOR - Party contracting directly with the City to furnish and perform all work and services in accordance with the Contract Documents.

COUNTY - The County in which the work is to be done.

DAY - Unless otherwise defined shall mean "calendar" day.

ENGINEER - The City Engineer; or his designated representative.

EXTRA WORK - Work not provided for in the Contract as awarded but determined by the City to be essential to the satisfactory completion of the Contract within its intended scope.

FINAL ACCEPTANCE - The acknowledgment by the City that the project or the work has been completed in accordance with the Contract Documents and provides the date at which the warranty or guarantee period begins.

INSPECTOR - A person, persons, or firm authorized by the Engineer to make detailed reviews, observations, reports and determinations of contract performance.

MAY - Used to refer to permissive actions.

METHOD OF MEASUREMENT - The manner in which a pay item is measured to conform with the pay unit.

NOTICE OF CLAIM - A written notification submitted to the Engineer that a demand or request for additional compensation or additional time may be made. The notification shall

1. Contain the words "notification of a potential claim" within its Subject line or the first paragraph
2. Describe the occurrence which is the reason that the Notice of Claim is being presented

NOTICE TO PROCEED - Written notice to the Contractor to proceed with the contract work including, when applicable, the date of beginning of contract time. Start of Construction, as defined below, may start at a later date.

PLANS - The drawings and pictures depicting the location and special orientation of the work to be done.

PROJECT - The work to be completed pursuant to this contract.

PROPOSAL - A standard form plus information supplied by the City, which contains spaces for completion by the Bidder which, when completed in its entirety and executed by the Bidder, along with all required additional documents, shall constitute the Bid. Said Bid shall constitute the Contractor's offer to perform all work required as set forth in the Contract Documents for the amount of money stated in the Bid.

PROPOSAL FORM - The documents furnished by the City on which the offer of a bidder is submitted.

PROPOSAL GUARANTY - The security furnished with a proposal to Guaranty that the bidder will enter into the Contract if the proposal is accepted.

RIGHT OF WAY - A general term denoting land, property, or interest therein, acquired for or devoted to the construction of an improvement.

SALVABLE MATERIAL - Material that can be saved or salvaged. Unless otherwise designated or directed by the City or shown on the plans, all salvable material shall become the property of the Contractor.

SAMPLES - Samples are physical examples furnished or constructed by the Contractor to illustrate materials, equipment, workmanship or finishes, and to establish standards by which the work will be judged.

SHALL - Refers to mandatory actions by either the Contractor or the City.

SHOP DRAWINGS - Drawings, diagrams, illustrations, certificates, test reports, schedules, performance charts, brochures, shop layouts, fabrication layouts, assembly layouts, foundation layouts, wiring and piping layouts, specifications and descriptive literature required by the Contract Documents which the Contractor is required to submit for approval.

START OF CONSTRUCTION – The date in which the Contractor begins physical work at the project site. Restrictions on start of construction are provided in the General Conditions and may be specified in the Special Conditions.

SUBCONTRACTOR - Party supplying labor and/or material for work at the site of the project for, and under separate contract or agreement with, the Contractor. Nothing contained in the Contract Documents shall create any contractual relationship between the City and any subcontractor.

SUBSTANTIAL COMPLETION - The date when the work is sufficiently completed so it may be safely, conveniently, and beneficially utilized by the City for all of the purposes for which it

was intended. Reduced liquidated damages are chargeable for a project or portions thereof which have separately specified damages, if there are items of work remaining to be performed relative to such work once full substantial completion status has been attained. In such cases the amount of liquidated damages due shall be twenty-five percent (25%) of the unreduced liquidated damage amount stated in the contract.

SUPERINTENDENT - The Contractor's authorized representative in charge of the work.

WORK - The furnishing of all labor, materials, equipment, and all other incidentals necessary to the successful and acceptable completion of all obligations as described in the Contract Documents, and the carrying out of all of the duties and obligations imposed by the Contract.

3. CONTRACTOR'S UNDERSTANDING

- A. It is understood and mutually agreed that by submitting a proposal, the Contractor acknowledges that he has carefully examined all documents pertaining to the work, the locations, accessibility, and general character of the site of the work and all existing buildings and structures within and adjacent to the site, and has satisfied himself as to the nature of the work, the condition of existing buildings and structures, the conformation of the ground, subsurface conditions, the character, quality, and equipment, machinery, plant, and any other facilities needed preliminary to and during prosecution of the work, the general and local conditions, the construction hazards, and all other matters, including but not limited to any labor situation which can in any way affect the work under the Contract. It is further mutually agreed that by submitting a proposal, the Contractor acknowledges that he has satisfied himself as to the feasibility and correctness of the Contract Documents for the construction of the work and that he accepts all the terms, conditions, and stipulations contained therein; and that he is prepared to work in peace and harmony with other Contractors performing work on the site.
- B. No verbal agreement or conversation with any officer, agent, or employee of the City, either before or after the execution of the Contract, shall affect or modify any of the terms, conditions, or other obligations set forth in any of the Contract Documents.
- C. The Contractor understands that, unless specifically stated otherwise in the contract documents, the intent of the contract documents is to provide complete and operable facilities. The Contractor's bid amount for this project, therefore, shall be and is considered to be for completion in conformity with this understanding, regardless of whether some aspect of the work to be performed is named as a separate bid item or not.

4. DEFECTIVE WORK

- A. A City Representative, designated by the City Engineer, shall give written notice of the noncompliance to the Contractor, when, and as often as the City Representative determines through his inspection that procedures, material, equipment or workmanship incorporated in the Project does not meet the requirements of the Contract. Within five (5) working days from the receipt of such notice, the Contractor shall undertake the work necessary to correct such deficiencies, and to bring the work into compliance with the Contract Documents. Should the Contractor not agree with the City Representative's determination, and as a condition precedent to any request for either additional compensation or time extension, or both, resulting from the City Representative's determination, the Contractor shall within three (3) working days provide a Notice of Claim to the Engineer that he may claim

additional compensation, time or both, and detailed explanation of the Contractor's position. The Contractor shall document the costs associated with the corrective work with daily records and cost data and shall furnish such information to the Inspector daily. Receipt of cost data shall not be construed to be an acceptance of the corrective work, or an authorization for a Change Order to cover the corrective work. Failure by the Contractor to provide the specified written notice of an intention to make a claim shall be sufficient basis to reject any related claim subsequently submitted.

- B. Prior to initial acceptance of the Project, the City may, at its option, retain work, which is not in compliance with the Contract if the City determines that such defective work is not of sufficient magnitude or importance to make the work dangerous or undesirable. The City also may retain defective work, if in the opinion of the Inspector, and with concurrence of the City Engineer, removal of such work is impractical or will create conditions, which are dangerous or undesirable. Just and reasonable value, for such defective work, shall be judged, by the Engineer and appropriate deductions shall be made in the payments due, or to become due to the Contractor. Initial acceptance shall not act as a waiver of the City's right to recover from the Contractor an amount representing the deduction for retention of defective work.

5. NOTICE AND SERVICE THEREOF

Where the manner of giving notice is not otherwise provided for in the Contract Documents, any notice to the Contractor from the City relative to any part of the Contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted to the Contractor at the address given in the Contractor's proposal, or at the last business address known to the City, or delivered in person to the Contractor or his authorized representative on the site or transmitted electronically by facsimile or electronic mail using phone numbers and addresses last provided by the Contractor. It is mutually agreed that such notice shall be sufficient and adequate. The Contractor shall provide the City, upon written request, facsimile phone numbers and electronic mail addresses, in writing.

6. MATERIAL AND EQUIPMENT SPECIFIED BY NAME

When material or equipment is specified by reference to one or more patents, brand names, or catalog numbers, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements, and that other materials or equipment, of equal capacities, quality and function may be considered. The Contractor may offer material or equipment of equal or better quality and performance in substitution for those specified which he considers would be in the City's interest to accept. After the Award of the Contract, the City will consider offers for substitution only from the Contractor and will not acknowledge or consider such offers from suppliers, distributors, manufacturers, or Subcontractors.

Substitutions

The Contractor's offer of substitution shall be made in writing to the Engineer and shall include sufficient data to enable the Engineer to assess the acceptability of the material or equipment for the particular application and requirements. If the offered substitution necessitates changes to or coordination with other portions of the work, the data submitted shall include drawings and details showing such changes. Contractor agrees to perform these changes as part of the substitution of material or equipment. Within thirty (30) calendar days after the receipt of the offer of substitution, the Engineer will review the material submitted by the Contractor and notify the Contractor if

approved for use or objections, if any, to the proposed substitution or if further information is required. Upon notification by the Engineer, the Contractor shall either provide the approved material or equipment, which complies with project specifications, or furnish requested additional information. While the Engineer might not take any objections to the proposed substitution and may approve the same, such action shall not relieve the Contractor from responsibility for the efficiency, sufficiency, quality and performance of the substitute material or equipment, in the same manner and degree as the material and equipment specified by name. Any cost differential associated with a substitution shall be reflected in the Contractor's offer of substitution and the Contract Documents shall be modified by a Change Order.

When the specifications state the construction shall be performed by the use of certain methods and equipment, such methods and equipment shall be used unless other methods are authorized by the Engineer. If the contractor desires to use a method or type of equipment other than those specified, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the method and equipment proposed to be used and an explanation of the reasons for desiring to make the change. If approval is given it will be on the condition that the Contractor will be fully responsible for producing construction work in conformity with the Contract Documents. If material or equipment is specified by only one patent or proprietary name, or by the name of only one manufacturer, it is for the purpose of standardization, or because the City knows of no equal. If standardization is the reason for using one name to specify any material or equipment, the specifications will so state, and substitutions will not be considered. In other cases, the Contractor may offer substitutions in the same manner as requesting a Change Order for products he considers being equal to those specified.

7. CONTRACT BONDS AND GUARANTEES

- A. The Contractor shall provide two surety bonds on the forms provided, each in an amount equal to 100% of the contract price. One shall serve as security for the faithful performance of the work and the other as security for the faithful payment and satisfaction of the persons furnishing materials and performing labor on the work. The bonds shall be issued by a corporation duly and legally licensed to transact surety business in the State of Arizona. Such bonds shall remain in force throughout the period required to complete the work and thereafter for a period of 365 calendar days after final acceptance of the work, plus 365 calendar days following the repair of any work pursuant to the guarantees herein made. The surety's liability on the bonds shall not exceed the underwriting limitations for the respective surety specified in Circular 570, published by the United States Department of the Treasury.
- B. Should any surety or sureties be deemed unsatisfactory at any time by the City, notice will be given to the Contractor to that effect and he shall forthwith substitute a new surety or sureties satisfactory to the City. No further payment shall be deemed due or will be made under this Contract until the new surety shall qualify and be accepted by the City.
- C. The Contractor guarantees to the City that all materials and equipment furnished under this Contract will be new and of good and sufficient quality, free from faults and defects as is necessary to complete the project as required by the Plans and Specifications.

8. INSURANCE

- A. The Contractor, at Contractor's own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly licensed, possessing a current A.M. Best,

Inc. Rating of B+6, as minimum and approved and licensed to do business in the State of Arizona with policies and forms satisfactory to the City.

- B. All required insurance herein shall be maintained in full force and effect until all work required to be performed under the terms of the Contract is satisfactorily completed and finally accepted - failure to do so may, at the sole direction of the City, constitute a material breach of this Contract.
- C. The Contractor's insurance shall be primary insurance, and any insurance or self-insurance maintained by the City shall not contribute to it.
- D. Any failure to comply with the claim reporting provisions of the policies or any breach of an insurance policy warranty shall not affect coverage afforded under the policy to protect the City.
- E. The policies, except Workers' Compensation, shall contain a waiver of transfer rights of recovery (subrogation) against the City, its agents, officers, officials and employees for any claims arising out of the Contractor's work or service.
- F. The insurance policies may provide coverage, which contains deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to the City under such policies. The Contractor shall be solely responsible for deductible and/or self-insured retention and the City, at its option, may require the Contractor to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.
- G. The City reserves the right to request and to receive, within ten (10) working days, certified copies of any or all of the herein required insurance policies and/or endorsements. The City shall not be obligated, however, to review same or to advise Contractor of any deficiencies in such policies and endorsements, and such receipt shall not relieve Contractor from, or be deemed a waiver of, the City's right to insist on strict fulfillment of Contractor's obligations under this Contract.
- H. The insurance policies, except Workers' Compensation, required by this Contract shall name the City, its agents, officers, officials and employees as additional insured.
- I. The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for the City or be construed as relieving the Contractor or his Subcontractors of responsibility for direct physical loss, damage or destruction occurring prior to final acceptance.
- J. Any insured loss under the policies of insurance required by this Agreement shall be adjusted with the City and made payable to City for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph K of this Article of these General Conditions. City shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged work shall be repaired or replaced, the moneys so received shall be applied on account thereof, and the work and the cost thereof shall be covered by an appropriate Change Order.

- K. City shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within ten (10) working days after the occurrence of loss to City's exercise of this power. If such objection were made, City shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, City shall upon the occurrence of an insured loss, give bond for the proper performance of these duties

- L. If City finds it necessary to occupy or use a portion or portions of the work prior to substantial completion of all of the work, such use or occupancy may be accomplished as provided in these General Conditions, provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy.

M. REQUIRED COVERAGE

The Contractor shall obtain for itself and provide the City with Certificates of Insurance indicating the scope and extent of coverage as set forth below. Required coverage's may be modified by an amendment to the Contract Documents.

1. GENERAL LIABILITY

Contractor shall maintain Commercial General Liability insurance with a limit of not less than \$3,000,000 for each occurrence with a \$3,000,000 Products and Completed Operations Aggregate and \$3,000,000 General Aggregate Limit. The policy shall include coverage for bodily injury, broad form property damage, personal injury, products/completed operations and blanket contractual coverage including, but not limited to, the liability assumed under the indemnification provisions of this Contract, which coverage will be at least as broad as Insurance Service Office, Inc. Policy Form CG 000211093, or any replacements thereof. The coverage shall not exclude X, C, U.

Such policy shall contain a severability of interest provision, and shall not contain a sunset provision or commutation clause, or any provision, which would serve to limit third party action over claims.

The Commercial General Liability additional insured endorsement shall be at least as broad as the Insurance Service Office, Inc.'s, Additional Insured, Form B, CG20101185, and shall include coverage for Contractor's operations and products and completed operations.

If required by this Contract, the Contractor subletting any part of the work, services or operations awarded to the Contractor shall purchase and maintain, at all times during prosecution of the work, services or operations under this Contract, an Owner and Contractor's Protective Liability insurance policy for bodily injury and property damage, including death, which may arise in the prosecution of the Contractor's work, service or operations under this Contract. Coverage shall be on an occurrence basis with a limit not less than \$3,000,000 per occurrence, and the policy shall be issued by the same insurance company that issues the Contractor's Commercial General Liability Insurance.

2. AUTOMOBILE LIABILITY

Contractor shall maintain Commercial Business Automobile Liability insurance with a combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence and \$2,000,000 for more than one person and property damage in the sum of not less than \$1,000,000 resulting from any one accident which may arise from the operation, actions or omissions of the Contractor or any Subcontractor in the performance of the project, and with respect to the Contractor's owned, hired, and non-owned vehicles assigned to or used in performance of the Contractor's work. Coverage will be at least as broad as coverage code 1, "any auto", (Insurance Service Office, Inc. Policy Form CA 00011293, or any replacements thereof). Such insurance shall include coverage for loading and offloading hazards. If hazardous substances, materials or wastes are to be transported, MCS 90 endorsement shall be included and \$5,000,000 per accident limits for bodily injury and property damage shall apply.

3. WORKERS' COMPENSATION

The Contractor shall carry Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of Contractor's employees engaged in the performance of the work; and, Employer's Liability insurance of not less than \$1,000,000 for each accident, \$1,000,000 disease for each employee, and \$1,000,000 disease policy limit.

In case any work is subcontracted, the Contractor will require the Subcontractor to provide Workers' Compensation and Employer's Liability to at least the same extent as required of the Contractor.

The Contractor shall furnish the City with a Certificate of Waiver of Subrogation under the terms of the Workmen's Compensation insurance. The Contractor shall defend, protect, and save harmless the City from and against all claims, suits, and actions arising from failure of the Contractor or the Subcontractor to maintain such insurance.

4. BUILDERS' RISK (PROPERTY) INSURANCE

The Contractor shall purchase and maintain, on a replacement cost basis, Builders' Risk insurance in the amount of the initial Contract Amount as well as subsequent modifications thereto for the entire work at the site. Such Builders' Risk insurance shall be maintained until final payment has been made or until no person or entity other than the City has an insurable interest in the property required to be covered, whichever is earlier. This insurance shall include interests of the City, the Contractor, and all Subcontractors and Sub-Subcontractors in the work during the life of the Contract and course of construction, and shall continue until the work is completed and accepted by the City. The insurance shall cover work performed under the Contract and materials, equipment or other items to be incorporated therein, while the same are located at the construction site, stored off-site, or at the place of manufacture. The policy shall cover not less than losses due to fire, mischief, weather, vandalism, malicious mischief, wind, collapse, riot, aircraft, smoke or any other casualty, including but not limited to earthquakes, tornadoes or other cataclysmic events, until the date of initial acceptance of the work. For new construction projects, the Contractor agrees to assume full responsibility for loss or damage to the work being performed and to the buildings under construction. For renovation construction projects, the Contractor agrees to assume responsibility for loss or damage to the work being performed at least up to the full Contract Amount unless otherwise required by the Contract Documents or amendments thereto.

Builders' Risk insurance shall be on an all-risk policy form and shall also cover false work and temporary buildings and shall insure against risk of direct physical loss or damage from external causes including debris removal, demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's service and expenses required as a result of such insured loss and other " soft costs" as required by the Contract.

Builders' Risk insurance must provide coverage from the time any covered property becomes Contractor's control and/or responsibility, and continue without interruption during construction or renovation or installation, including any time during which the covered property is being transported to the construction installation site, and while on the construction or installation site awaiting installation. The policy will provide coverage while the covered premises or any part thereof are occupied. Builders' Risk insurance shall be primary and not contributory.

If the Contract requires testing of equipment or other similar operations, at the option of the City, the Contractor will be responsible for providing property insurance for these exposures under a Boiler Machinery insurance policy.

The maximum deductible allowable under this policy shall be \$5,000. The policies providing this insurance shall name the City, its agents and attorneys, the City Engineer, and the Design Engineer as additional insured as their respective interests shall appear.

5. **BLASTING INSURANCE:**

If the Contractor determines that the performance of the project will require use of explosives, the public liability and property damage insurance shall specifically cover all liability arising out of the Contractor's acquisition, storage and use of explosives. If work requiring use of explosives is not discovered until after the commencement of the work, upon discovery, the Contractor shall immediately procure blasting insurance as required by this paragraph. The Contractor shall not undertake any blasting without submission to the City of a Certificate of Insurance covering all liability due to blasting regardless of amount. Any delays incurred by the Contractor in procuring blasting insurance shall not be grounds for an extension of time for completion of the project, nor for any additions to the contract price.

6. **OTHER INSURANCE:**

The Contractor shall carry and maintain all other insurance including Flood Insurance as may be required by Federal, State, County and City laws or ordinances. The Contractor may be required to, at the discretion of the City, maintain additional fire and extended coverage with an endorsement for vandalism and malicious mischief in his name and also in the name of the City in an amount of not less than \$100,000.00.

The Contractor may utilize up to \$2,000,000 in excess liability coverage to meet the above-required limits for insurance. Any deductibles shall be declared and the City may require deposits be made to it up the amount of such deduction, at its sole discretion.

7. **CERTIFICATES OF INSURANCE**

Prior to commencing Services under this Contract, Contractor shall furnish the City with Certificates of Insurance, or formal endorsements as required by the Contract, issued by

Contractor's insurer(s), as evidence that policies providing the required coverage's, conditions and limits required by this Contract are in full force and effect.

All Certificates of Insurance required by this Contract shall be identified with a bid serial number and title. A \$25.00 administrative fee shall be assessed for all Certificates received without the appropriate bid serial number and title. Each of the Certificates of Insurance shall contain a clause substantially in the following words:

It is hereby understood and agreed that if this policy is canceled, a written notice of such cancellation shall be mailed to the City of Sedona within ten (10) working days.

Such insurance coverage obtained by the Contractor other than Workmen's Compensation Coverage, shall name the City, the City Engineer, the Design Engineer, and their directors, officers, principals, agents, attorneys, and employees as Additionally Insured.

Insurance evidenced by these certificates shall not expire, be canceled, or materially changed without fifteen (15) days prior written notice to the City.

All certificates of insurance and endorsements required to be purchased by Contractor pursuant to this Article shall be filed with the City. Certificates shall be acceptable to City. If a policy does expire during the life of the Agreement, a renewal certificate of the required coverage must be sent to the City not less than five days prior to expiration date.

Each certificate of insurance shall include the job site and project number. Coverage shown on certificate of insurance must coincide with the requirements in the text of the Contract Documents.

9. SCHEDULE OF CONSTRUCTION

- A. The Contractor shall submit to the City within five (5) days after award of Contract, or as may be otherwise requested by the City, a schedule showing the order in which the Contractor proposes to carry on the work and at a rate sufficient to successfully construct all of the Work set forth in the Contract Documents within the Contract Period. Such schedule shall show the dates at which the Contractor will start and complete the several parts of the Work. The schedule shall identify the following items if applicable:
1. Potholing.
 2. Mobilization.
 3. Roadway work to be broken down at a minimum, on a street by street basis.
 4. Pipeline work to be broken down on a manhole to manhole basis and individual pump station construction or abandonment.
 5. Site prep.
 6. Drainage improvements prep and construction.
 7. Ramp prep, construction and finish.
 8. Sidewalk prep, construction and finish.
 9. Bridge prep, abutment construction, bridge construction, bridge placement, and finish.
 10. Traffic control.
 11. Demobilization

12. SWPPP.

13. Other items as applicable and/or listed in the bid schedule.

The schedule shall also show the order of construction and delivery dates at which the Contractor will start and complete the several other parts of the Work, the order of construction and delivery dates of critical materials and equipment along with monthly payment estimates, dates for submittal of working drawings and shop drawing to the Engineer for review, and the name of the project superintendent. The City shall be notified in writing of changes in the project superintendent. The schedule shall be subject to review and comment by the City as per MAG specifications section 108.4. The schedule shall be binding on the Contractor and shall be complied with by the Contractor unless, for good cause shown, a modification of the schedule shall be requested in writing to and approved by the City. The schedule shall also:

1. Be updated with each progress billing.
2. Include a detailed two week look ahead, indicate work requiring inspection, and be updated at each progress meeting.
3. Show work tasks progress in time periods of seven days or less unless otherwise approved by the Engineer.
4. Identify the critical path(s) for the work and task float.
5. Identify tasks corresponding to bid item descriptions when possible. Less comprehensive task designations may be used to comply with 2 above.
6. Conform to any time and location constraints identified in permits and the contract documents.
7. Span the current contract date to the end of the contract time.
8. Be submitted in an electronic format compatible with Microsoft Project Standard 2007, and hard copy format.
9. Identify long lead items.

The schedule format (size, color, type format) shall be such that the different tasks, durations, critical path and durations can be easily distinguished. The Contractor shall also provide a listing of tasks and durations with the schedule. If the schedule and list is being provided prior to a Notice to Proceed it need not include dates for start and completion of tasks. Any schedule and list provided after the Notice to Proceed has been issued shall include dates. A schedule and list shall be provided on the date of the Notice to Proceed. The Contractor shall begin work on the project site within five (5) working days of the Notice to Proceed, unless stated otherwise in specifications. Failure to do so is sufficient cause for termination in addition to other remedies the City may have.

- B. Where the City's operations require specific sequencing of the work, such sequencing requirements as provided for in the Contract Documents shall be followed.
- C. When progress has not kept pace within two weeks of the schedule or if otherwise requested by the City the Contractor shall update his schedule within five (5) working days of the City's written request. The revised schedule will include a description of what actions will be done by the Contractor to bring the project back on schedule. **Failure to not provide a revised schedule within one week of its request may result in the withholding of \$750 from any progress payment due.** Each written request by the City shall be considered a separate request and subject to the withholdings specified, provided it is within the following billing cycle from a previous request.

- D. The Contractor shall provide the City with a list of emergency phone numbers, addresses, pager numbers, facsimile numbers, and electronic mail addresses for contacting key personnel in the case of any after-hours emergency.
- E. The Contractor shall furnish the City with a schedule for hours of work. In it, the Contractor shall note the begin work, begin daily clean-up and daily shutdown times to be followed by the Contractor during the project unless otherwise changed. The Contractor's regular work hours on regular workdays shall be between 7:00 AM and 5:30 PM Monday through Thursday, unless otherwise stated in the specifications. Friday work is permitted between 7:00 AM and 5:30 PM for work that does not require City inspection. This work hours timeframe shall be considered to include start-up of equipment and daily clean-up of the work area. Weekends and Holidays for the City of Sedona shall be considered non-regular work hours. Permission to work non-regular work hours shall be subject to approval by the Engineer and the provisions of General Conditions, Section 39. **The Engineer may deduct \$250 per day for work outside of approved work hours after issuance of one written warning during the course of the project.**

The City of Sedona has the following holiday schedule:

New Year's Day, January 1st

Martin Luther King/Civil Rights Day, 3rd Monday of January

President's Day, 3rd Monday in February

Memorial Day, Last Monday in May

Independence Day, July 4th

Labor Day, 1st Monday in September

Veteran's Day, November 11th

Thanksgiving Day, 4th Thursday in November AND the Friday after Thanksgiving Day

Christmas Day, December 25th

10. PROGRESS MEETINGS

Periodic meetings shall be held between the City of Sedona officials, Contractor, and other affected agencies, at a standard time and place, and at a frequency to be established during the pre-construction meeting. These meetings shall be used to discuss scheduling and matters related to the project.

11. TAXES

The Contractor shall be responsible for and shall include in his bid prices all applicable taxes, including but not limited to Federal, State, and Local Taxes.

12. ASSIGNMENTS

The Contractor shall not assign the whole or any part of the Contract or any monies due or to become due hereunder without the written consent of the City and of the Surety on the Contractor's Bond. A copy of such consent of Surety, together with a copy of the assignment, shall be filed with the City. If the Contractor assigns all or any part of any monies due or to become due under the contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims and liens of all persons, firms, and corporations for services

rendered; for the payment of all materials and equipment furnished and for payment of all materials and equipment used or rented in the performance of the Work called for in the Contract; and for the payment of any liens, claims, or amounts due the Federal, State, or local government or any of their funds.

13. SUBCONTRACTING

- A. Subcontractors will not be recognized as employees or agents of the City, nor as having any privity of contract with the City. All persons engaged in the work of construction will be considered by the City to be employees of the Contractor. The Contractor will be held responsible for their work and for all materials provided by them, which shall be subject to the provisions of the Contract.
- B. Each subcontract shall contain a suitable provision for cancellation or termination thereof should the Subcontractor neglect or fail to conform to every provision of the contract.
- C. Subcontractors collectively shall not perform more than fifty percent (50%) of the value of the total work required pursuant to the Contract Documents. **The Contractor agrees that should this percentage be exceeded the City may consider the Contractor in breach of this contract and/or make deductions equal to one half of one percent of the total approved contract value for each one percent of subcontracted work beyond that allowed above.** The Contractor shall perform fifty percent (50%) of the contract work using the Contractor's own organization as construed in ADOT Standard Specifications 2000 Section 108.01.
- D. The City of Sedona encourages all contractors to utilize minority and women owned businesses whenever possible.

14. COOPERATION AND COLLATERAL WORK

- A. In general, the Contractor shall be responsible for the scheduling and coordination of his work with any other work, which may be, carried on in the construction areas for this project by other parties or by the City simultaneously with his construction work. The contractor shall include in his bid any costs, which may be involved on his part as a result of coordinating his construction with such other activity.
- B. \When two or more Contractors are employed by the City in related or adjacent work, each shall conduct his operations in such manner as to not cause any delay or hindrance to the other and shall properly connect and coordinate the execution of their respective work with the other. The City will not be responsible for damage caused by such delays, and such delays will not entitle the contractor(s) to an extension of time. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work.

If the proper execution of any part of the Contractor's work depends upon the work of any other Contractor, the Contractor shall inspect and promptly report to the City Engineer any discrepancies between the executed work and the drawings or any defects in such work that render it unsuitable for such proper execution. The failure of the Contractor to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of his own work. The exception is for defects, which may develop in the other

contractor's work, after the execution of the Contractor's collateral work that would not have been discovered before the Contractor's collateral work began.

- C. The contractor shall coordinate his work, and cooperate with any other persons or entities operating on or adjacent to the site of the project.

Where persons employed by other persons or entities are engaged in or near the construction areas for this project, and where such work on the part of said parties results in a delay in performance by the Contractor, and where such delay, in the opinion of the City Engineer, is of such nature that it could not have reasonably been foreseen or anticipated by the Contractor in time for him to take steps to prevent same, then the Contractor shall be entitled to an extension of time.

The Contractor shall promptly make good any injury or damage caused by him that may be sustained by other Contractors or employees of the City. The Contractor shall join his work to that of others and perform his work in proper sequence in relation to that of others.

15. LINES AND GRADES

The Contractor shall be responsible for providing all construction staking and surveying needed to construct the facilities in accordance with the Plans and Specifications, and shall include such costs in his bid for the applicable items of work. The Contractor shall employ a surveyor licensed in the State of Arizona to perform all surveying necessary to construct this project to the lines and grades provided in the plans. The Contractor shall provide to the Engineer the Surveyor's listing of lines, grades, distances, curve information and point data (including northing, easting and elevation) used to actually establish project staking at least two working days prior to establishing subgrade, setting forms, placing pre-cast facilities, pouring concrete, installing pipe, or placing asphalt. The Contractor shall provide a set of as-built plans showing manhole and inlet inverts, rim and grate elevations, gutter elevations at 50-foot intervals, changes of grade, invert and finished grade elevations of concrete structures at the center and corners, and the inlet and outlet ends of pipes. The surveyor shall seal and designate them as as-built plans. This as-built plan is in addition to the Status As-Builts and Record As-Builts required under other provisions of these specifications. The Final contract payment shall not be due until all as-built plans have been submitted and accepted. Any work performed without complying with the Survey requirements in these specifications shall be considered unauthorized work and subject to the provisions of MAG section 105.11. As-Built plans shall be submitted in the following formats: hard copy in the same size as provided by the City to the Contractor for the contract, AutoCAD 2021, and .pdf.

The Contractor shall pothole utility facilities and report results to the Engineer at least two (2) working days prior to excavating for installation of roadways, asphalt patches, catch basins, underground pipes, manholes, footings, vaults, and basins. The report shall indicate any conflicts or inadequate clearances as related to the work to be performed. Failure to perform potholes and report results, as required, will result in the loss of the right to make a claim for changes in compensation and time due to conflicts, interference, protection or other costs related to the utility, as such, a claim would have been mitigated by performing the pothole timely.

16. EXCAVATIONS, UNDERGROUND FACILITIES LOCATION, AND STORMWATER POLLUTION PREVENTION.

The Contractor in the execution of the Work shall conform to all applicable Federal and State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over employment discrimination, wages and working conditions, and the construction of the Work, including but not limited to all construction codes, O.S.H.A. Requirements, and safety codes, which may apply to (1) performance of the Work; (2) protection of adjoining and adjacent property; (3) maintenance of passage-ways, guard fences or other protective facilities; and shall obtain all permits and pay for licenses and approvals necessary for the construction of the Work and give all required notices.

ARS-40-360.22 Excavations: Determining locations of underground facilities; providing information. This statute requires that no person shall begin excavation before the location and marking are complete or the excavator is notified that marking is unnecessary and requires that upon notification, the owner of the facility shall respond as promptly as practical, but in no event later than two working days. The “Arizona 811” (1-800-782-5348) (formerly Arizona Blue Stake Center) was formed to provide a more efficient method of compliance with this statute.

ARS-40-360.23 Making excavations in careful, prudent manner: liability for negligence. This statute states that obtaining information as required does no excuse any person making any excavation from doing so in a careful and prudent manner nor shall it excuse such persons from liability for any damage or injury resulting from his negligence.

ARS-40-360.28 Civil penalty: Liability. If the owner or operator fails to locate, or incorrectly locates the underground facility, pursuant to this article, the owner or operator becomes liable for resulting damages, costs and expenses to the injured party.

Licenses and Permits:

The Contractor shall be required to obtain, at his expense, the appropriate licenses and permits from the City of Sedona before the start of construction. It is the duty of the Contractor to determine that all necessary permits have been obtained. Costs associated with obtaining a license are not waived.

Arizona Pollutant Discharge Elimination System (AZPDES) Permit

A. General requirements:

The Contractor shall comply with the AZPDES Stormwater requirements for construction sites pursuant to the requirement of the Arizona Department of Environmental Quality (ADEQ). The Contractor shall be designated as permittee and shall be responsible for providing the necessary labor and materials, and for taking the appropriate measures to assure compliance with the ADEQ requirements, as well as other Federal, State and local requirements pertaining to storm water discharges. As the permittee, the contractor is responsible for completing, in a manner acceptable to the ADEQ, all documents required including the following:

1. Storm water Pollution Prevention Plan (SWPPP) for the project including certification form. The contractor will be required to submit for approval, update and revise the SWPPP as necessary throughout the construction of the project in order to assure compliance with permit requirements. The completed SWPPP shall be kept on the project site at all times during construction of the project.
2. Notice of Intent (NOI) to be covered by Arizona General Permit for Arizona including certification of signature.

3. Notice of Termination (NOT) of coverage under AZPDES (upon project completion).
- B. Regardless of whether compliance with AZPDES is required the Contractor shall prepare a Storm Water Pollution Prevention Plan. That Plan shall at a minimum address the following issues:
- Designation, maintenance and clean-up of vehicle storage, fueling, lubrication and maintenance areas
 - Clean up and off-site disposal of excess construction materials including asphalt, concrete, paints, oils, and wrapping materials
 - Daily work day clean-up of debris in work area
 - Prevention of wind born debris/Dust Control Plan
 - Prevention of erosion resulting from rain or watering activities'
 - Measures to prevent silt and debris generated by this project from migrating beyond the construction site boundaries. Measures such as trapping and removing debris and dirt generated, or other measures acceptable to the Engineer, shall be taken.
 - The Contractor shall comply with the City of Sedona General Storm Water Pollution Prevention Guidelines, this includes filing the City Notice of Intent.

C. Submittals:

1. Preliminary copies of the NOI and SWPPP shall be submitted to the Engineer two days prior to the preconstruction meeting. Any necessary revisions to the SWPPP shall be subject to review by the Engineer, prior to implementation.
2. The Contractor shall submit completed, signed NOI forms at least forty-eight (48) hours prior to the initial start of construction on the project to the Arizona Department of Environmental Quality in Phoenix, Arizona (ADEQ, 1110 West Washington Street, Phoenix, AZ. 85007). Generally projects of less than one (1) acre may not be applicable to this requirement at this time. If the project is subject to these requirements, the Contractor shall be designated the permittee.
3. Failure by the contractor (or any of its appropriate subcontractors) to submit the NOI forms within the required timeframe shall result in delay of the start of construction, but shall not prohibit issuance of the Notice to Proceed, at the City's sole discretion. A copy of the completed NOI shall be posted on the construction and a copy of the SWPPP shall be kept on the construction site.

Contractor's Responsibilities:

1. It is the Contractor's responsibility to perform inspection of all storm water pollution control devices on the project on a monthly basis and following each rainfall. The contractor shall prepare reports on these inspections and retain these reports for a period of three years following project completion. Inspection reports shall be submitted monthly to the CITY along with payment requests. The contractor shall maintain all storm water pollution control devices on the project in proper working order, including cleaning and/or repair during the duration of the project.
2. No condition of either the AZPDES or the SWPPP shall release the contractor from any responsibilities or requirements under other environmental statutes and regulations.

3. Upon total project completion, acceptance, and de-mobilization, the contractor shall submit its completed, signed NOT form to the ADEQ with copies to the same agencies who received copies of the NOI, thereby terminating all AZPDES permit coverage for the project.

D. Payment: There shall be no separate payment made to the Contractor for all material, labor, and other incidental costs relating to the provision, installation, and maintenance of items relating to this permit during project construction. Such incidental costs shall include contractor costs in order to assure proper operation of the pollution-control devices installed including all maintenance, cleaning, and disposal costs associated with clean-up and repair following storm events or other runoff or releases on the project.

17. EXISTING UTILITIES, RIGHTS-OF-WAY, EASEMENTS

A. EXISTING UTILITIES

Because of the nature of this contract, existing utilities are not shown or indicated in these specifications, except to note that their locations are within rights of way, streets and easements throughout the City of Sedona area. The fact that utilities are not shown shall not relieve the Contractor of the following responsibilities:

1. The Contractor shall be responsible for the preservation of all existing water, sewer, storm sewer, buried transmission lines or any cable or utility. If damaged, all costs for the necessary repairs shall be paid by the Contractor.
2. The Contractor shall locate and verify the location of all existing utilities prior to any excavation. This shall be done at least two (2) days prior to excavation for installation of project facilities or ordering equipment or materials for those facilities.
3. The Contractor shall be responsible for the location of all service lines.
4. Continuation of Service - All services shall be maintained to all areas at all times during the construction period, except when it is necessary to shut down a line to make a connection with the new line. Residents shall be given twenty-four (24) hour notice when it is known that the service will be interrupted. The Fire District shall be kept advised of the status of all fire hydrants affected by any work on this Project.
5. The Contractor is responsible for as-building all existing utilities within the improvement area (location, depth, and material).

B. RIGHTS-OF-WAY AND EASEMENTS

The City will furnish land, right-of-way, or easements as shown in the Contract Documents for the performance of the Work under the Contract. Contractor shall confine his operations to the land, right-of-way or easements furnished, and will restore the same to their original conditions to the extent reasonably possible prior to final acceptance of the work. Prior to construction or entry thereon, the Contractor shall obtain copies of and become familiar with any agreements and stipulations used by the City in acquiring temporary or permanent easements.

The Contractor shall remain within easement areas and rights-of-way obtained or owned by the City or easement areas the Contractor has obtained. Disturbed areas shall be reasonably restored upon completion of installation of the project improvements and related appurtenances in the easement. The Contractor shall be responsible to adhere to easement provisions whether the easement was obtained by Contractor or City. A temporary 4-foot high orange fence shall be placed to define the work area for all easements encompassing all work that occurs outside the City right-of-way. Clearing by manual means for the purpose of defining the area to be fenced shall be the only activity allowed on the easement before the fence is placed. City shall provide the Contractor with a copy of the easement agreement with the property owner, upon request. Contractor shall be responsible for all restoration of the easement as described in the easement agreement. Trees and larger vegetation shall be preserved to the maximum extent practicable.

The Contractor shall be responsible for the preservation of all existing property pins. If disturbed or damaged the Contractor shall be responsible for all costs associated with the restoration of any property pin disturbed by the Construction activities. Any property monuments, which require resetting, shall be reset under the direction of a licensed Surveyor by the State of Arizona and proper documentation recorded with the appropriate County.

Access by Residents: The Contractor shall ensure that all residents have access from the Street to their property each night. When access to a resident's property cannot be maintained during normal working hours (week days), the Contractor must personally notify the affected residents two working days in advance of the closure. Such notification shall be documented in writing to the Engineer. Emergency access shall not be blocked, for any reason without the express written permission from the owner.

Access to Public Facilities: The Contractor shall assure that safe access to facilities including, but not limited to, parking lots, picnic shelters, playgrounds, and pedestrian ways is provided. Any disruption to the public's normal use of said facilities shall not occur without the express written permission from the City.

Intersection and Driveway Maintenance: Once work has commenced in a particular street, the Contractor shall provide and maintain access facilities to all connecting streets, intersections and private driveways by ramping or surfacing with suitable materials to ensure access at all times. If in the opinion of the City, such facilities, or materials used, are not capable of supporting traffic, the Contractor shall remove the materials and provide better-suited materials, including asphalt concrete or similar, as directed by the Engineer. This work shall be considered incidental to the Project, and all costs shall be borne by the Contractor. Failure to comply with these requirements may result in stoppage of the work until corrected as determined by the Engineer, with no time extension being granted for such delay to the Project.

18. OPERATIONS, LAYDOWN YARD AND STORAGE AREAS

- A. All operations of the Contractor (including laydown yard, storage of materials, supplies, and equipment) shall be confined to areas authorized by the City. **The City of Sedona does not have available construction staging or material lay down facilities, except as specified otherwise in the specifications.** The Contractor is responsible for arranging and providing for such facilities as is deemed necessary for carrying out the work of this contract. The City does not warrant or represent in any way the availability of staging or material lay down

areas within the City or vicinity of the project. It is the Bidder's responsibility to make such determinations. The price paid for mobilization shall include all costs for and associated with providing construction staging and material lay down facilities necessary for constructing the project. If a mobilization item is not included in the specification, the cost for compliance with item shall be considered as included in the unit price (s) bid for the various items of work. The Contractor shall be liable for all and any damages caused by him to such premises.

The Contractor shall comply with the following, regarding laydown yards:

- Any use of vacant property adjacent to or near the project used for parking or servicing equipment and/or storing of material will require the Contractor to provide written approval from the property owner, homeowner associations as applicable, and the filing of a temporary use permit from the City of Sedona.
 - A copy of the property owner's approval shall be submitted to the Engineer, stating the use of the laydown yard for use during the construction of this project is acceptable.
 - The Contractors yard shall be enclosed with a six (6) foot temporary fence.
 - Storage of Gasoline will require Fire Department approval.
 - Clearing or grading of the site in excess of fifty (50) CY of soil will require a grading permit. No grading will be allowed which changes the drainage path for the parcel without the approval of the City Engineering Department. All existing pipes and drainage facilities at the laydown yard will be maintained in working order at all times.
 - A stabilized construction entrance will be required if the vacant property laydown yard is not already gravel or pavement. The laydown yard shall be adequately maintained to control dust and mud from leaving the property.
 - Work in the laydown yard shall be scheduled so as to comply with any City noise or light Ordinances and these specifications.
 - Equipment, materials, etc., shall be located so as to minimize impact to adjacent properties.
 - Before any grading of any laydown yard, property corners will be located for the parcel. Any property pins disturbed by the Contractors operations will be replaced prior to final acceptance of the project.
 - The Contractor shall obtain a written release from the property owner, homeowner's associations or similarly concerned parties after completion of use. A copy of the release shall be presented to the Engineer.
 - Equipment and material shall not be stored in the right-of-way and/or street easement during non-work hours without permission of the Engineer. Such permission shall be subject to finding that it is impractical to move the equipment or material because of size or that permission has been granted to close the right-of-way to all traffic, including local traffic. Lack of construction yard or other staging area shall not be considered as reason to grant permission. Such permission, if granted, shall be subject to conditions determined at the sole discretion of the Engineer.
- B. The Contractor shall hold and save the City free and harmless from liability of any nature or kind arising from any use, trespass, or damage occasioned by his operations on the premises of third persons.

C. The Contractor shall be wholly responsible for the care, compliance with law, and storage of materials, supplies or equipment delivered on the work site or purchased for use thereon. Stored materials, supplies, or equipment shall be carefully and continuously protected from damage or deterioration and so located so as to facilitate inspection by the City. The responsibility for the care and storage of materials, supplies, or equipment shall be with the Contractor whether such materials, supplies, or equipment are furnished by the Contractor or by the City. Storage of materials, supplies, or equipment shall not unduly interfere with the progress of the Contractor's Work or the work of any other contractor.

D. Traffic Control:

Adequate traffic flow shall be maintained at all times, all barricading and temporary signage for detours and traffic control must meet the standards set by the Manual of Uniform Traffic Control Devices (MUTCD) and the City Engineer. If traffic control is not a separate bid item; then, it is considered incidental to the work and shall be included as appropriate in the Contractors bid. The Contractor must also take responsibility for public safety, meaning:

1. That, except for alleyways, one lane of the roadway for each direction must be kept open at all times; OR
2. Certified flaggers must be provided to properly channel traffic at all times when two separate lanes (one each direction) cannot be maintained open; OR
3. Total closure of a roadway shall only occur with the written permission of the City Engineer. For all rights-of-ways requiring closure for any work therein, appropriate permits shall be obtained. Prior to start of construction, the Contractor shall provide the Engineer with planned traffic control methods and procedures for this project. A notice of closure for residents, along with a map showing the planned area of distribution shall be included as part of the planned methods and procedure. Proper traffic control and advance warning signage shall be in place prior to any road closure.
4. When detours or road closures are implemented an overall map showing anticipated flow of traffic shall be provided.
5. The Contractor shall have a designated person responsible for overall traffic control on-site at all times.
6. A Traffic Control Plan shall be submitted for review. The plan is intended to be a guide; Contractor shall submit any proposed revisions for approval by the Engineer.
7. Pedestrian traffic must be maintained at all times, on at least one side of the road.
8. The Contractor shall supply a Public Announcement showing closures and detours.

E. Water Use

1. All water used by Contractor for testing, compaction, dust control, or other uses related to construction, shall be obtained by the Contractor from an approved water source. The Contractor shall be responsible for all deposits, charges and fees.

Reclaimed water is available to the Contractor for dust control and other on-site construction uses at no cost to the Contractor (other than testing costs noted below), according to the following limitations (any required water outside these limitations shall be provided by the Contractor from an approved source):

- a. Reclaimed water will be available for use by the Contractor Monday – Friday. It shall be the Contractor's responsibility to apply for and obtain a Type 2 General Water Reuse Permit (Class A+ Reclaimed Water) from ADEQ for dust control and other construction uses. Contractor shall also be responsible for the cost of fecal coliform testing. The cost of testing is \$50 for each day that water is taken for construction use.
- b. Water shall be provided from the effluent pump station wetwell at the Wastewater Treatment Plant using contractor-provided submersible pump.
- c. Contractor is responsible to supply conveyance and storage facilities for water made available by the City. Contractor shall record and report to the City on a weekly basis the date and amount of water used.

F. Dust and Debris Control

- 1. The contractor shall cover all trucked loads of soil, rock and material that may drop from, be sifted from or blown from the vehicle. The City may require that trucks arriving with uncovered loads not be allowed to deliver material to the project, regardless of whether or not the truck is the contractor's, a subcontractor's, a service provider's, or a material supplier's vehicle. If trucks leave the site with uncovered loads the City reserves the right to do one or more of the following:**
 - a. The truck will not be allowed on the site
 - b. The contract compensation will be reduced by \$150 per observed uncovered load. The contract time will be reduced by one day**
 - c. The Police Department may issue a citation.
2. Pine slash and/or cut down pine trees shall be removed from the City within 24 hours, including any non-working days, of being broken or cut. This measure is to minimize pine bark beetle infestation in Sedona.
3. The contractor shall take measures to prevent blowing debris and/or dust from the site.
4. Dust Control shall comply with the following:
 - a. Dust control shall be maintained at all times on the project. Spray nozzles shall be used as necessary on equipment to reduce dust. Mist shall be visible when standing adjacent to the equipment.
 - b. A Dust Control Plan shall be submitted prior to Start of Construction.
 - c. Cleanup and Dust Control shall be in compliance with MAG Section 104.1.3 and 104.1.4.
5. The contractor shall clean any dirt tracked from the project work area from streets and sidewalks using equipment and methods that will not create excessive dust. Sweeping is the preferred cleaning method. Washing of streets and/or sidewalk and other paved areas will require special permission from the Engineer and shall be subject to conditions imposed by the Engineer. The City reserves the right to require that the Contractor to cease work that is resulting in excessive tracked mud and/or dirt from and within the project area,

and to require cleaning prior to allowing the ceased work to continue. The exercise of the City's right and impacts there from shall not provide a basis for claim by the contractor. Failure of the Contractor to cease work shall be sufficient reason for the City to reduce the contract time by one calendar day per incident, at the City's sole discretion.

6. Dirt, debris, wastewater and other debris shall not be disposed of in stormwater facilities and/or natural drainage channels. The City may require inspection of stormwater facilities and/or natural drainage channels prior to and during the work to verify compliance with this requirement. The City may require the contractor to clean stormwater facilities and/or natural drainage channels if the contractor has disposed of material to them. Final Completion will not be issued until all stormwater facilities have been inspected and approved.

G. Open Trenches

MAG Specification Section 601.2.10 is modified to limit the length of open trench to 1100 feet within the project. An open trench includes any longitudinal excavated area 3 inches or more below adjacent land which has settled or been left lower intentionally. All open trenches shall properly marked and protected so as to warn pedestrians and vehicular traffic of a low area.

19. RIGHT-OF-ENTRY

Contractor shall provide to the City, Architect-Engineer, or representative of the Federal, State, County, District and Municipal governmental officials and services, the proper facilities for access to the Work, whenever it is in preparation or progress.

20. ACCESS AND DRAINAGE

The Contractor shall keep a sufficient clear area around fire hydrants to permit their full and effective use in case of fire. The Contractor shall keep natural drainage and watercourses unobstructed by spoil piles, material storage, or any other operations, or provide for other equal courses effectively placed.

21. SANITARY CONVENIENCES

The Contractor shall furnish the necessary sanitary conveniences, properly secluded, for the use of work persons during construction, and these conveniences shall be maintained in a manner that will be inoffensive and in compliance with Federal, State and local health and sanitation requirements.

22. CLEANUP PRACTICES

- A. The Contractor shall at all times during the progress of the work maintain a reasonably clean job site, this includes, but is not limited to, keeping signs clean and legible, minimizing mud, rock, and dirt on roadways, and keeping ditches free of trash and construction materials. If in the opinion of the Engineer, excessive dust, mud or debris exists at the job site, the Contractor shall immediately remove said material as directed. All costs associated with this work shall be borne by the Contractor. The location of debris and material stockpiles shall be as directed by the Engineer.

- B. The Contractor shall begin his daily clean-up process at a typical time agreed to by the City at the pre-construction meeting. If the Contractor's operations and daily shut-down exceed a forty hour work week or eight hour day then the City will be entitled to withhold a portion of the Contractor's progress payment for City "overtime" work pursuant to Section 32 and 39, unless authorized by the Engineer.
- C. The site shall be kept clean of trash and debris including but not limited to, loose construction materials, such as sand, cement, lime, wood pieces, building paper, and other miscellaneous paper. All trash and debris shall be placed in an appropriate number of approved containers and moved and disposed of off the site daily in a location where it will not be possible to be dispersed. No burning of trash or debris will be permitted on the site, except where designated by the Engineer. The laydown yard shall have a minimum of one container of appropriate size at all times.

When site daily clean-up has not been kept up as requested in writing by the City the Contractor shall bring the site into compliance with the City within 24 hours or the City shall withhold \$350 for each day out of compliance.

- D. Before final payment, the Contractor shall remove all rubbish, excess materials, temporary structures, and equipment. All parts of the work shall be left in a neat and presentable condition. Excess mounds of earth shall be leveled and ruts and depressions filled, such that the completed work is attractive. If in the opinion of the Engineer, the Contractor does not maintain the Construction Site in a safe and clean condition, or does not adequately clean up the site at the completion of the work, or rectify any valid complaints of damage to property resulting from the Construction, the City may clean up or rectify damage and charge the costs thereof to the Contractor.
- E. The Contractor shall be responsible for locating sites and making arrangements for disposal of all material removed from the site. This includes concrete, asphalt, unsuitable or unstable trench material and any other trash, rubbish or debris generated as a result of construction. Asbestos, hazardous substances or materials, hazardous waste or any other regulated substances or materials shall be disposed of in accordance with all applicable federal, state and local regulations.
- F. All vegetation and improvements removed from easements by the Contractor shall be removed or repaired by the Contractor in accordance with the easement agreement with the property owner, the same being done at no additional cost to the City.

23. PLANS AND SPECIFICATIONS

- A. The City will provide the Contractor with four (4) sets of plans, drawings, and specifications after the execution of the Contract. If additional plans, drawings, and specifications are required, the Contractor shall compensate the City for it.
- B. When, in the opinion of the City, revised partial plans, drawings and specifications are required to clarify or reflect authorized changes or additional work the City shall provide four (4) copies of such revisions to Contractor. The Contractor must pay for any additional copies. Contractor shall immediately post such revisions to his record set of Contract Documents.

- C. The plans, drawings, and specifications are the property of the City, and are furnished to the Contractor for the construction of Work under the Contract only.
- D. The data given in the specifications and shown on the plans and drawings is believed to be accurate but the accuracy is not guaranteed. The Contractor must confirm all levels, locations, measurements, and verify all dimensions on the job site prior to construction and adapt his Work into the exact limits of construction. Scale measurements taken from plans are only for reference.
- E. Drawings showing the details of the Work specified are designated "plans" or "drawings" and together with the specifications form an integral part of the Contract Documents.

24. CORRELATION OF DOCUMENTS

- A. Plans, drawings, and specifications are cooperative and supplementary. Portions of the Work, which can best be illustrated by the plans or drawings, may not be included in the specifications and portions best described by the specifications may not be depicted on the plans or drawings. All items necessary or incidental to completely construct or erect the Work specified shall be furnished, whether called for in the specifications or shown on the plans or drawings. Unless otherwise stated the plans and specifications shall be considered to require construction or erect of a complete and operable facility.
- B. Special Conditions shall take priority over Technical Specifications, which shall take priority over General Conditions; large-scale drawings shall take precedence over small-scale drawings. In case of a disagreement between the plans, drawings, and specifications, or within a document itself, the better quality and the greater quantity of work shall be estimated and included in the bid and contract sums and the matter drawn to the City's attention for further decision, and possible issuance of an addendum.

25. SHOP DRAWINGS, SAMPLES, AND OPERATOR'S INSTRUCTION

- A. The Contractor shall furnish all Shop Drawings and Samples required by the Contract Documents. Shop Drawings of equipment and devices offered by the Contractor for approval of the City shall be in sufficient detail to adequately show construction and operation. The above material shall be submitted to the City for review in electronic format (.pdf and/or .dwg). Shop drawings submitted as herein provided by the Contractor and approved by the City for conformance with the design concept shall be executed in conformity with the Contract Documents unless otherwise required by the City.
- B. Work performed in connection with the fabrication, manufacture, shipment, or purchase of material or equipment prior to approval as specified shall be at the Contractor's sole risk and responsibility.
- C. Shop Drawings and Samples shall be accompanied by a letter of transmittal indicating that the Contractor has reviewed and approved the submittal. The transmittal shall give a list of the numbers and dates of the submittal, and shall be in the form required by the City. Any re-submittals shall show numbers and dates of previous submittals. Shop Drawings shall be complete in every respect and bound in sets.

- D. The Contractor shall submit all Shop Drawings and Samples (submittals) sufficiently in advance of construction requirements to allow ample time for checking, correcting, resubmitting, and rechecking to avoid any delay in progress of the Work. In no case however shall this time be less than five (5) working days without the consent of the Engineer. In the case of submittals for pump installations and similarly complex equipment the minimum timeframe shall be twenty (20) working days. This timeframe shall also apply to resubmittals. If more than five (5) submittals are made in a week the minimum City review time shall be extended by five (5) days for each submittal. The Contractor shall be solely responsible for delays and costs related to resubmittals or untimely submittals.
- E. Shop Drawings or Samples submitted shall be marked with the name of the Project, numbered, and bear the stamp of approval of the Contractor as evidence that the Shop Drawings and Samples have been checked by the Contractor. Any shop drawings or samples submitted without this stamp of approval shall not be considered and shall be returned to the Contractor for resubmission. If the Shop Drawings or Samples show variation from the requirements of the Contract, the Contractor shall call such variation to the City's attention in his letter of transmittal in order that, if acceptable and City gives written approval to the variation, suitable action may be taken for proper adjustment.
- F. By approving and submitting shop drawings and samples, the Contractor thereby represents that he has determined and verified all field dimensions and measurements, field construction criteria, materials, catalog numbers, and similar data, and that he has checked, and coordinated such submittals with the requirements of the Work and the Contract Documents.
- G. If a Shop Drawing or Sample, as submitted, indicates a departure from the Contract requirements which the City finds to be in the interest of the City and to be so minor as not to involve a change in the contract price or time for performance, it may approve the Drawings or Samples; provided, however, such departure is slight in nature and does not affect the design concept of the Work.
- H. All items of standard equipment shall be the latest model at time of delivery.
- I. When Shop Drawings are submitted for the purpose of showing the installation in greater detail, their approval shall not excuse the Contractor from requirements shown on the plans and specifications.
- J. Shop Drawing and Sample submittals not conforming completely with the above requirements shall be returned to the Contractor, without action, for re-submittal and the resulting delay shall be entirely the responsibility of the Contractor.
- K. The City's check and approval of Shop Drawings and Samples, specifications, and descriptive literature submitted by the Contractor shall be only for general conformance with design concept, as otherwise provided, and shall not be construed as:
1. Permitting any departure from the Contract requirements;
 2. Relieving the Contractor of the responsibility for any error in details, dimensions, or otherwise that may exist in such submittals;
 3. Constituting a blanket approval of dimensions, quantities, or details of the material or equipment shown; or

4. Approving departures from additional details or instruction previously furnished by the City. Such check or approval shall not relieve the Contractor of the full responsibility of meeting all of the requirements of the Contract Documents.
- L. One (1) electronic copy and four (4) sets of bound operator's instructions and maintenance manuals shall be furnished by the Contractor for equipment furnished under the Contract that is specially listed or that is considered to be of a special or complex nature. Operator's instruction and maintenance manuals shall include, in part, detailed lubrication drawings showing type and frequency of lubrication. Detailed parts drawings shall show location, name and catalog numbers of parts.
- M. One (1) electronic copy and four (4) sets each of bound service parts manuals shall be furnished by the Contractor for all items of standard manufacture.
- N. All operator instructions, maintenance, and parts manuals shall be bound in permanent binders satisfactory to the City and shall be furnished to the City before final acceptance of the installation by the City.
- O. Four (4) copies of any manufacturer's guaranty/warranty or certificate for any type of material or equipment provided shall be submitted to the City prior to final acceptance of the Work by the City.

26. DRAWINGS SHOWING CHANGES DURING CONSTRUCTION

Throughout the progress of construction, the Contractor shall maintain a careful up-to-date record of all changes on the plans and drawings during actual construction. *With each progress payment invoice the Contractor shall provide a "Status As-Built" showing all work completed to date.* Callouts will identify type, size and quantity of each item installed. The Contractor shall annotate all sewer taps stationing upstream to downstream using swing ties from adjacent manholes or other method the Engineer may approve in writing. Upon completion of Work, and prior to acceptance by the City, the Contractor shall file with the City one set of complete contract drawings with all changes and Contractor's field construction notes neatly and legibly recorded thereon. Such drawings shall include but not be limited to, the exact routing and clearances, if changed from drawing location, of sewer, water, gas, oxygen supply, condenser water lines, fuel oil tanks and lines, fire protection lines, and any other major buried utility lines and routing of buried electrical feeder lines and changes to routing of conduit runs which are buried or concealed in concrete slabs. The Contractor shall furnish such As-Built utility and drainage invert and rim elevations as well as gutter, top of curb shots and horizontal location of valves and hydrants placed as a part of this construction. This information is for use by the City in the preparation of record "As-Built" Drawings. Curb and gutter shots shall be spaced no further than 50 feet apart and shall include any significant bends, drops or other deviations from a straight horizontal or vertical alignment.

27. MATERIALS, EQUIPMENT, SUPPLIES, SERVICES, AND FACILITIES

- A. It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, equipment rental, water, heat, light, fuel, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the Work in a workman like manner within specified time.

- B. No materials, equipment, or supplies for the Work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.
- C. Equipment shall be properly equipped with safety devices including but not limited to spark arrestors, back up alarms, reflectors, signage, labeling, and lights.
- D. At least one (1) set of all appropriate Material Safety Data Sheets shall be maintained in a common location on the project site at an identified location during all working hours.

28. WORKMANSHIP, MATERIALS, AND EQUIPMENT

- A. All material and equipment furnished by the Contractor shall be new and unused and shall strictly conform to the Contract Documents. Competent labor, mechanics and tradesmen shall be used on the Work. Experienced manufacturer's representatives shall be used to supervise the installation of equipment as may be required by the City. Any special tools or equipment, which may be required, shall be provided by the Contractor.
- B. The acceptance at any time of materials or equipment by or on behalf of the City shall not be a bar to future rejection if they are subsequently found to be defective, inferior in quality or uniformity to the material or equipment specified, or are not as represented to the City.

29. QUALITY OF MATERIALS IN ABSENCE OF DETAILED SPECIFICATIONS

- A. Where the Contract requires that materials or equipment be provided or that construction work be performed, and detailed specifications of such materials, equipment or construction work are not set forth, the Contractor shall perform the work using materials and equipment as described in the specifications. Constructed or installed as described therein, and shall follow standard practices in the performance of construction work. The work performed shall be in conformity and harmony with the intent to secure a good, serviceable standard of construction.
- B. All tests and re-tests unless otherwise provided, shall be in accordance with the pertinent sections of the latest edition of the standards applicable to the material or devices to be tested. A partial list of the principal societies referred to and their Abbreviations follows:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASTM	American Society of Testing Materials
AWWA	American Water Work Association
CPI	Clay Pipe Institute
CS	Commercial Standards
FS	Federal Specifications
NEC	National Electric Code
TMCA	Tile and Marble Contractors of America

30. VARIATIONS FROM ESTIMATED QUANTITIES

When unit prices are utilized in the Contract Documents, it may be reasonably expected that there could be variations in final quantities from the estimated quantities by reason of actual conditions and/or change orders. An adjustment in compensation may be allowed only to the following extent:

- A. For a decrease greater than twenty percent (20%) in either the total cost of the contract or the total cost of a major item and when a reasonable cost analysis supports an increase in the pro rata share of fixed cost chargeable to this item in total, an adjustment in the monies due the Contractor may be made. The total amount, including any adjustment, will not exceed eighty percent (80%) of the original lump sum contract amount or, for a unit price item, the total amount, including adjustment, will not exceed eighty percent (80%) of the original extended unit bid price.
- B. For an increase greater than twenty percent (20%) in either the total cost of the contract or the total cost of a major item, any adjustment made will only apply to that cost in excess of one hundred twenty percent (120%) of the original bidding schedule. If either party presents a reasonable cost analysis that shows a change in the pro rata share of fixed costs chargeable to this item in total, an increase or decrease adjustment may be made. This increase or decrease adjustment will be made on such basis as is necessary to cover a reasonable estimate of cost, plus an allowance, not to exceed ten percent (10%), for overhead and profit.
- C. A major item is an item whose total cost, determined by multiplying the bidding schedule quantity and the contract unit price, is equal to or greater than the amount indicated below. A major item will remain a major item unless it is completely eliminated. Compensation for a completely eliminated major item shall be limited to the amounts indicated, but not to exceed the amount demonstrated by information provided to show the cost impact of the deletion, not including anticipated profit.

Total Contract amount as awarded equal to or greater than (in dollars)	But is less than (in dollars)	A major bid item Shall be equal to or greater than the following amount (in dollars)	If the item is completely eliminated compensation shall be limited to no more than (in dollars)
\$0.00	\$1,000,000	\$50,000 or 10% of the Contract amount as awarded	\$2,000
\$1,000,000	\$5,000,000	5% of the Contract amount as awarded	\$5,000
\$5,000,000	\$20,000,000	2.5% of the Contract amount as awarded	\$7,500

- D. For either an increase or decrease in cost, no claim shall be made by the Contractor for any loss of anticipated profits.

31. PROGRESS PAYMENTS

- A. When monthly progress payments are authorized, the Contractor shall, on the date determined during the pre-construction meeting, submit to the City an itemized application for payment, supported by “Status As-Builts” and such data substantiating the Contractor's right to payment as the City may require, on forms acceptable to the City. Progress payments shall be made no more than once each calendar month and provided that there are a minimum fifteen (15) calendar days between payments, unless otherwise authorized on a payment-by-payment basis by the City Engineer or City Manager. Progress payments are subject to retainage of ten percent (10%) with possible reduction to five percent (5%) in accordance with the provisions of Arizona Revised Statutes.
- B. The Contractor shall provide to the City at the time of payment, a waiver and release to date from the Contractor and each and every Subcontractor and material supplier whose work or materials are included in the application for payment, evidencing that said Contractor, Subcontractor or material supplier has been paid in full to date.
- C. Unless otherwise provided in the Special Provisions, payment will not be made on account of materials or equipment not incorporated in the work, at the time of a request for payment, but delivered and stored at the site. Similarly, payment will not be made for materials or equipment stored at some other location unless agreed upon in writing. If payment is allowed per the Special Conditions, payment for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the City to establish the City's title to such Materials or equipment or otherwise to protect the City's interest, including applicable insurance and transportation to the site for those materials and equipment stored off-site.
- D. The Contractor warrants that title to all materials, supplies, and equipment covered by an application for payment, whether incorporated into the Work or not, shall pass to the City, upon receipt of payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances; and that such materials, supplies or equipment furnished or installed comply with the applicable requirements of the Contract Documents.
- E. The passing of title to the City as herein provided shall not be construed as relieving the Contractor of the sole and complete responsibility for:
 - 1. The care and protection of the materials, supplies, equipment, and Work for which payment has been made.
 - 2. The restoration of any damaged or destroyed Work, materials, supplies or equipment. Such responsibility shall continue until all Work under the Contract has been completed and accepted by the City.
- F. Under no circumstances shall payment constitute a waiver of the City's right to require the Contractor to fulfill all of the terms and conditions of this Contract.
- G. **INVOICE PROCESSING:** The City will not accept inaccurate, illegible, or incomplete invoices (requests for payments). Invoices shall be hard copy, with original signature. Electronic or facsimile signatures are not acceptable on the invoice.
 - 1. The City distributes payments on every other Friday, beginning on 01/09/20 for calendar year 2021, unless holidays dictate otherwise.

2. The Engineer must receive an acceptable, correct invoice with required supporting documentation not later than close of business on the Wednesday, nine (9) calendar days prior to the expected check distribution day.
3. For projects longer than sixty (60) calendar days duration, each request for payment shall be accompanied by a progress schedule, effective through the invoice period. The City shall not release a payment until the contractor provides an acceptable, accurate, and updated project schedule.

32. PAYMENT WITHHELD

- A. The City may decline to certify payment on account of subsequently discovered evidence or observations, may nullify the whole or any part of any payment certificate previously issued to such extent as may be necessary to protect the City from loss on account of any one or more of the following:
 1. Defective Work not remedied.
 2. A reasonable doubt that the Contract can be completed for the balance then unpaid.
 3. Unsatisfactory prosecution of the Work.
 4. Not maintaining a current project schedule.
 5. Not providing adequate progress payment "Status As-Built".
 6. Deductions for not conforming to daily clean-up requirements.
 7. Deductions for reimbursement of City overtime inspection.
 8. Liquidated damages payable by the Contractor.
 9. Disputed Work or Materials.
 10. Failure to comply with other material provisions of the Contract.
 11. Third-party claims filed or reasonable evidence that a claim will be filed.
 12. Failure of the Contractor or Subcontractor to make timely payments for labor, equipment, and materials.
 13. Damage to the Owner.

In addition, the City reserves its rights under ARS Sections 32-1129.01 and 34-221I.

- B. When any of the above problems are resolved, payment shall be made for amounts withheld pursuant to Article 31.

33. MEASUREMENTS

- A. The itemized Application for Payment will be used by the Engineer as a basis for evaluating requests for payment, except in cases where unit prices have established the basis for payment shall include as a minimum the following items:
 1. Separate cost itemizations for mechanical, piping, structural, electrical instrumentation, painting, pre-engineered structures, and architectural finish work.
 2. Separate cost line items, showing both purchase and installed cost, for the major equipment items listed in the bidding schedule.
 3. A separate line item for mobilization not to exceed ten percent (10%) of the total Contract amount. This limitation shall apply even when a bid item for mobilization is shown in the bid schedule, unless the Engineer has assigned a fixed cost for the item. Amounts excess of this limitation shall be included on the final payment.

4. A separate line item for demobilization, not to exceed one-half of one percent (0.5%) of the total Contract amount. This limitation shall apply even when a bid item for demobilization is shown in the bid schedule, unless the Engineer has assigned a fixed cost for the item. Amount in excess of this limitation shall be included on the final payment.
 5. Separate line items for earthwork, demolition and clearing and grubbing, where appropriate. Measurement and payment for the various items shown by the Contract Drawings and described in the construction Specifications, and comprising the completed work, shall be subject to this Article.
- B. The contractor may subdivide any of the lump sum bid items in the proposal as necessary to identify items per (A) above, however the neither the total bid or the total of any subdivided bid item line shall exceed the total in the bid proposal as awarded.
- C. Payment for each item shall constitute payment in full for the furnishing of all materials, equipment, appurtenances, labor, plant and tools necessary to provide a complete workmanlike, finished, and satisfactory project, as shown by the Contract Drawings and described in the Specifications. Each item shall be completed with all necessary connections, testing, painting and related work accomplished to provide for the satisfactory use and/or operation of the item. No additional payment will be made for work related to each item, unless specifically noted or specified.
- D. No additional payments will be made for work related to any item unless specifically noted and called for in the Bid Proposal. Payment will be made at the unit price or lump sum price bid in the Bid Proposal.
- E. Measurement will be on the completed work in place, with no allowance for waste, and as may be more particularly described in the description of the various items set forth in the Specifications and as shown by the Contract Drawings.
- F. The quantities set forth in the Bid Proposal are used for the purpose of determining the basis of the Award of the Contract, and may be varied by the Engineer to conform to the requirements of the work as set forth in the Contract Drawings, and the Contractor agrees to perform the work on the basis of the prices bid for the items contained in the Bid Proposal regardless of whether or not the items or units are decreased or increased.**
- G. The Engineer shall have the right to order omitted from the Contract any item or a portion of the estimated quantity for any item found unnecessary to the work without violating the Contract or Performance Bond.
- H. Except in cases where unit prices form the basis for payment under the Contract, the Contractor shall, within twenty (20) days of receipt of the notice to proceed, submit a breakdown of the Contract price showing the value assigned to each part of the work including an allowance for profit and overhead. In submitting the breakdown, the Contractor certifies that it is not unbalanced and that the value assigned to each part of the work represents his estimate of the actual cost, including profit and overhead, of performing that part of the work. The breakdown shall be sufficiently detailed to permit its use by the Engineer as one of the bases for evaluating requests for payment.
- H. Mobilization and Demobilization: Payment for Mobilization shall include the cost for setting up Project offices and moving Equipment to the site, storage facilities, obtaining permits, and

all other items required to prepare the Project site for commencement of construction activities. Demobilization shall include removal of Contractor's facilities and Equipment, and final cleanup, and all other items required to complete Demobilization.

Payment for mobilization shall be in accordance with Section 901 of ADOT Standard Specifications for Road and Bridge Construction (most current edition), except as modified by this section and General Conditions Section 18, 33, and 66. Retention shall apply to mobilization payments. The first payment for mobilization shall be contingent on providing:

1. A traffic control plan that has been approved by the Engineer
2. The Storm Water Pollution Control Plan provisions are in place per the SWPPP in the Civil Plans
3. The Contractor shall have a City of Sedona or ADEQ NOI for stormwater pollution prevention
4. The Project Sign has been posted
5. A complete project schedule as required by the General Conditions, Section 9.

- I. Excavation-Generally: The excavation rates shall include the amount for working in such a manner as not to interfere with the stability of adjacent structures and properties, for the costs of all timbering or other support required, for all necessary measures to keep the excavation free from water and sewage whether affected by floods, storms or otherwise, for working space, refilling, consolidating and disposal of surplus material from temporary spoil heaps or disposal as directed by the Engineer. The rate shall apply to the excavation in any material, including rock.

No extra payment will be made if the position of the work as set out will not allow the use of a mechanical plant or necessitates the cartage to temporary spoil heaps of excavated material and the reloading and cartage back for refilling of excavations or disposal.

34. PAYMENT, USE OR OCCUPANCY OF WORK

- A. No progress or final payment, nor any partial or entire use or occupancy of the Work or improvement, nor acceptance thereof, by the City shall be evidence of the performance of the Contract or construed to be acceptance of defective work or improper materials, either wholly or in part. The Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute.
- B. The City shall have the right to take possession of, use, or occupy any completed or partially completed portions of the Work, notwithstanding the time for completing the entire Work or any portions, may, or may not, have expired. Such taking possession, use or occupancy shall not be deemed an acceptance of any Work until all Work has been completed in accordance with the Contract Documents. If such prior use or occupancy increase the cost, or delays the Work, the Contractor shall be granted such extra compensation or extension of time, or both, as City may determine.
- C. Consent of Surety and endorsement from the insurance carrier or carriers permitting prior occupancy or use of any completed or partially completed portions of the Work by the City shall be secured by the Contractor. Contractor and his Surety and enforcement from the insurance carrier or carriers permitting prior occupancy or use of any completed or partial

completed portions of the Work by the City shall be secured by the Contractor. Contractor and his Surety and insurance carrier hereby agree that such consent shall not be unduly withheld.

35. CLOSEOUT PROCEDURE

When the Contractor considers that the Work, or a portion thereof which the City has allowed to be accepted separately, is substantially complete, the Contractor shall prepare a letter stating the work, or a portion of the work, is substantially complete and submit to the City a comprehensive list of items to be completed or corrected. Substantial completion shall not operate to change the contract time to which liquidated damages are applicable. Reduced liquidated damages are chargeable for a project or portions thereof which have separately specified damages, if there are items of work remaining to be performed relative to such work once full substantial completion status has been attained. In such cases the amount of liquidated damages due shall be twenty-five percent (25%) of the unreduced liquidated damage amount stated in the contract, and shall not begin until after the contract completion date.

The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's list, the City will make an inspection to determine whether the Work or designated portion thereof is substantially complete. The City Engineer shall have the sole right to determine if a Work or portion thereof is substantially complete. If the City's inspection discloses any item, whether or not included on the Contractor's list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the City. The Contractor shall then submit a request for another inspection by the City to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the City will prepare a certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Contractor and City for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix a reasonable time within which the Contractor shall finish all items on the list accompanying the Certificate. If the Contractor does not complete the items within the time fixed by the City, the City, upon ten (10) working days notice, shall have the option to complete the uncompleted Work for the Contractor and deduct the cost from any amount due to the Contractor, whether or not the contract completion date has passed.

The Contractor may request a written statement from the City Engineer of what constitutes substantial completion by writing a letter of "Notice Of Intent to Declare Substantial Completion." The letter shall be sent no later than fifteen (15) working days prior to the anticipated date of Substantial Completion. The letter shall state what items the Contractor intends to complete prior to declaring substantial completion and what date substantial completion is anticipated by. The City Engineer shall respond to the letter within ten (10) working days accepting or adding to the list of items to complete prior to substantial completion. The City Engineer's response to the list shall not prevent the City Engineer from amending the list within a reasonable time prior to the anticipated date of substantial completion, or from considering factors not known at the time the response was prepared.

36. FINAL PAYMENT

- A. Prior to receiving final payment, the work shall be completed according to the Contract Documents, as determined by the City. Retention shall be as provided in A.R.S. §34-221. This includes, but is not limited to, submittal of complete as constructed documents.
- B. The acceptance of final payment by the Contractor shall operate as a release to the City of all claims by the Contractor for all things done or furnished in connection with the Contract and for every act and neglect of the City, and others relating to or arising out of the Work under the Contract, except for claims made in writing and still unsettled, and specifically itemized at the time the final payment request is made.
- C. No payment, final or otherwise, shall operate to release the Contractor or his Surety from any obligations under the Contract or under the Performance Bond or Labor and Materials Payment Bond, including, but not necessarily limited to anyone or more of the following:
 - 1. Obligations arising from or relating to latent defects.
 - 2. Faulty or defective work or material, which does not comply with the requirements of the Contract.
 - 3. Failure of the construction, equipment, or fixtures to perform properly in accordance with the requirements of the Contract Documents.
 - 4. Unsettled claims.
 - 5. Claims for non-payment of laborers, mechanics, material men, or suppliers, or for equipment used or rented.
 - 6. Claims under the maintenance requirements of the Contract Documents or any special warranties provided for in the Contract Documents.

37. SUPERVISION BY CONTRACTOR

- A. The Contractor or his designated representative will be required to give personal attention to the fulfillment of this Contract and to keep the work under control and in accordance with the Schedule for Completion. The contractor shall provide a competent Representative with full authority to receive and execute such instructions, orders or directions as the Engineer, or his agents or representatives may issue in connection with the Contract.

The Contractor will supervise and direct the work at all times. He has the obligation to determine the means, methods, techniques, sequences and procedures of construction, except in those instances where the City, to define the quality of an item of work, specifies in the Contract a means, method, technique, sequence or procedure for construction of that item of work. The Contractor shall be responsible to perform the Work so that the quality of the Work conforms to the plans and the specifications while in progress and as finally completed.

- B. Instructions and information given by the City, Engineer, or his agents or representatives to the Contractor's representative on the work shall be considered as having been given to the Contractor. Before any work is done at the job site, the Contractor shall give written notice to the Engineer stating the name, home address and telephone number of the Contractor's representative. The Contractor shall also inform the Engineer in writing prior to any change of representative. A statement naming more than one person to be in charge depending upon which one is present at the time will not be acceptable.
- C. The Contractor shall file with the Engineer the names, addresses, and telephone numbers of representatives who can be contacted at any time in case of emergency. These representatives

must be fully authorized and equipped to correct unsafe or excessively inconvenient conditions immediately on order of the Engineer.

- D. The Contractor shall pay and cause his Subcontractors to pay any and all accounts for labor, services, equipment, and materials used by the Contractor and his Subcontractors during the performance of work under this Contract, including all applicable taxes and insurance. Such accounts shall be paid as they become due and payable within the time limits set forth by law. The Contractor shall furnish proof of payment of such accounts to the City.
- E. **The plan or method of work suggested by the City or the Engineer to the Contractor but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor. The City and the Engineer assume no responsibility therefore and in no way will be held liable for any defects in the work which may result from or be caused by the use of such plan or method of work.**

38. WEATHER

- A. During periods when weather or other conditions are unfavorable for construction, the Contractor shall pursue only such portions of the work as shall not be damaged thereby. No portions of the work where acceptable quality or efficiency will be affected by unfavorable conditions shall be constructed while those conditions exist. It is expressly understood and agreed by and between the Contractor and the City that the Contract time for completion of the work described herein is a reasonable time taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.
- B. The Contractor shall not be assessed liquidated damages, nor the cost of engineering and inspection during any delay in the completion of work caused by Acts of God, acts of the public enemy, acts of a public agency or owner, or a utility to provide for removal or relocation of existing utilities, unless such delay is caused in whole or in part by Contractor or any of its Subcontractors.
- C. A rain, windstorm, high water or other natural phenomena for the specific locality of the work, which might reasonably have been anticipated from historical records of the general locality of the work, shall not be construed as abnormal. It is hereby agreed that rainfall greater than the following cannot be reasonably anticipated:
 - 1. Daily rainfall equal to, or greater than, one inch during a month when the monthly rainfall exceeds the normal monthly average by fifteen percent or more.
 - 2. Daily rainfall equal to, or greater than one and one-half (1-1/2) inch at any time.

Rainfall data shall be collected at the job site by the Contractor.

39. OVERTIME

Any Work necessary to be performed after regular working hours, on Sundays, or legal holidays, shall be performed without additional expense to the City unless otherwise provided in the Contract Documents.

The Contractor is responsible for completing his work activities within regular working hours. Should the Contractor elect to run his crews more than a typical 10-hour day, he may elect to with

prior coordination with the City. Any inspection, which is required beyond the City of Sedona's Standard 10-hour work day due to extended work hours or late daily cleanup, is subject to a withholding by the City from the Contractors progress payment for the cost of the overtime inspection during that period. The amount withheld shall be itemized by person and reflect any overtime premiums paid.

40. INDEMNIFICATION

A. To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the City, its agents, officers, officials and employees from and against all tortuous claims, damages, losses and expenses (including but not limited to attorney fees, court costs, and the cost of appellate proceedings), relating to, arising out of, or alleged to have resulted from the acts, errors, mistakes, omissions, work, and/or services of the Contractor, its agents, employees or any tier of Contractor's subcontractors in the performance of this Contract. Contractor's duty to defend, hold harmless and indemnify the City, its agents, officers, officials and employees shall arise in connection with any tortuous claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death, or injury to, impairment, or destruction of property including loss of use resulting there from, caused by Contractor's acts, errors, mistakes, omissions, work or services in the performance of this Contract including any employee of the Contractor, any tier of Contractor's subcontractor or any other person for whose acts, errors, mistakes, omissions, work or services the Contractor may be legally liable. The Contractor shall, with respect to all work which is covered by or incidental to this Contract, indemnify and hold the City, Engineering Dept., all officers, employees, attorneys, agents of the City and the City Engineer, harmless from and against all of the following made by any person or entity not a party to this Agreement:

1. Any claim, liability, loss, damage, costs, expenses, including reasonable attorneys' fees, expert witness fees, court costs and other expenses of litigation, awards, fines, or judgments, arising by reason of the death or bodily injury to persons, injury to property, design defects (if design originated by Contractor only) or other loss, damage or expense, including any of the same resulting from any alleged or actual negligent or intentional acts or omissions of the Contractor, the Subcontractors, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether it is caused in part by a party indemnified by this Contract and regardless of whether said acts or omissions of such party are active or passive.
2. Any claim, liability, loss, damage, costs, expenses, including reasonable attorneys' fees, expert witness fees, court costs and other expenses of litigation, awards, fines, or judgments, arising out of any dispute regarding the Contract or any work performed under the Contract.
3. Any claim, liability, loss, damage, costs, expenses, including reasonable attorneys' fees, expert witness fees, court costs and other expenses of litigation, awards, fines, or judgments, arising out of any dispute regarding the Contract or any work performed under the Contract by any Subcontractor.
4. Any loss or damage that may happen to the work or any part thereof, and any loss or damage to any of the materials or other property used or employed in performing the work, including any loss or damage during transit or storage of any property or materials,

including any property or materials furnished by the City, including reasonable attorneys' fees, awards, fines, or judgments.

B. However, the Contractor shall not be obligated under this Contract to indemnify the City with respect to the sole negligence or willful misconduct of the City or its agents or employees or Design Engineer.

C. The indemnity obligations of this Contract shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which otherwise exists by statute or under the common law of the State of Arizona, except those in conflict with the express terms of these General Conditions. The law of comparative negligence, as adopted by the State of Arizona, shall be binding upon the relationship between the parties, except as set forth herein.

D. The amount and type of insurance coverage requirements set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

41. ACCIDENT PREVENTION - EMERGENCY - AUTHORITY TO ACT

After the Contract Notice to Proceed has been issued through final acceptance of the Contractor's work, it shall be the Contractor's responsibility for protection and safety of the public and workers twenty-four (24) hours a day, seven (7) days a week. This responsibility will also be placed on the Contractor after final acceptance when the Contractor is on site performing any Guaranty/Warranty work.

Whenever, in the opinion of the Engineer, the Contractor has not taken sufficient precaution for the safety of the public or the protection of the work to be constructed under this Contract, or of adjacent structures or properly, and whenever, in the opinion of the Engineer, an emergency has arisen and immediate action is considered necessary, then the City, with or without notice may provide suitable protection by causing work to be done and materials to be furnished and placed. The cost of such work and materials shall be borne by the Contractor, and if the same is not paid on presentation of the bills, such costs will be deducted from any amounts due or to become due to the Contractor. The performance of such emergency work shall not relieve the Contractor of responsibility for any damage that may occur.

42. PROTECTION OF WORK

The Contractor, at no additional expense to City, shall at all times safely guard and protect his own Work; provide, erect, and maintain suitable barriers around all improvements, work areas, excavations, or obstructions to prevent accidents; and provide, place, and maintain during the night sufficient lights, signals, and signs for this purpose on or near the Work. The Contractor shall at all times, until its completion and final acceptance, protect his Work apparatus, equipment, and material from accidental or any other damage; and make good any damages thus occurring at no additional cost to the City.

43. PROTECTION OF PROPERTY

A. The Contractor, at no additional expense to the City, shall at all times (1) safely guard the City's property and abutting or adjacent property from injury, loss, or damage in connection with the Contract; (2) protect by false work, braces, shoring, or other effective means all buildings,

foundations, walls, fences, property pins and other property along his line of Work, or affected directly by his Work, including, but not limited to the City's property, against damage; (3) cover or otherwise protect stockpiles of materials to avoid damage to any property from such materials; and/or (4) repair, replace, or make good any such damage, loss or injury, unless such is caused directly by the City or his duly authorized representatives.

- B. The Contractor shall exercise care to protect from injury all water lines, sanitary sewer lines, gas mains, telephone cables, electric cables, services pipes, and other utilities or fixtures which may be encountered during the progress of the Work. All utilities and other service facilities or fixtures if damaged, shall be repaired by the Contractor without additional compensation.
- C. The Contractor shall personally check and verify utility information on the plans. Where existing utilities or structures are shown on the plans or drawings, they are believed to be accurate but are not guaranteed to be such or that these are the only utilities or structures in the construction area. Protection is completely the responsibility of the Contractor and he must satisfy himself as to the existence and location of all utilities and structures.
- D. The Contractor shall give written notice of at least forty-eight (48) hours before breaking ground, to all persons, superintendents, inspectors, or those otherwise in charge of property, streets, water, gas, or sewer pipes, telephone or electrical cables, railroads, or otherwise who may be affected by the Contractor's operation in order that they may remove any obstruction for which they are responsible and have a representative on the site to see that their property is properly protected.

44. PROTECTION OF PERSONS

- A. The Contractor shall:
 - 1. At all times protect the lives and health of his employees under the Contract.
 - 2. Take all necessary precautions for the safety of all persons on or in the vicinity of the Work site.
 - 3. Comply with all applicable provisions of Federal, State, and Municipal safety laws and building codes.
 - 4. Comply with all pertinent provisions of the "Manual of Accident Prevention on Construction" issued by the Associated General Contractors of America, Inc., latest edition, to prevent accidents or injury to persons, on, or adjacent to the premises where the Work is being performed. The Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of persons and shall post danger signs warning against the hazards created by such features of construction as protruding nails, rod hoists, well holes, elevator hatchways, scaffolding, window openings, stairways, and falling materials; and he shall designate a responsible member of his organization on the Work site whose duty shall be the prevention of accidents.
- B. The Contractor shall comply with all provisions of the "Occupational Safety and Health Act" (OSHA), including any amendments thereto and rules and regulations issued pursuant thereto, applicable to the Work and performance of the Contract. Whereas state in which Work is performed has passed legislation bearing on Occupational Safety and Health, such legislation and amendments thereto, together with rules and regulations issued pursuant thereto shall be complied with by the Contractor.

45. POTENTIALLY DANGEROUS WORK

- A. When the use of explosives, driving, or removal of piles, wrecking, excavation Work or other similarly potentially dangerous Work is necessary for the prosecution of the Work, the Contractor shall exercise the utmost care so as not to endanger life or property. The Contractor shall be fully responsible for any and all damages, claims, and for the defense of any actions against the City resulting from the prosecution of such Work in connection with or arising out of the Contract.
- B. The Contractor shall notify each private and public utility company or other owner of property having structures or improvements in proximity to the site of the Work, of his intent to perform potentially dangerous Work. Such notice shall be given sufficiently in advance to enable the companies or the owners of property to take such steps as they may deem necessary to relieve the Contractor of responsibility for all damages, claims, or the defense of any actions against the City resulting from the performance of such Work in connection with or arising out of the Contract.
- C. All explosives shall be stored in a secure manner and all storage places shall be marked clearly "EXPLOSIVES-KEEP OUT", and shall be in the care of competent watchmen at all times. Blasting Permits must be obtained from the Sedona-Oak Creek Fire District, 2860 Southwest Drive, Sedona, AZ 86336 (602) 282-6800.
- D. If blasting is required, building inspection reports must be conducted for properties within 150-foot of the proposed blasting area. For affected structures that are to remain after the construction, the report shall consider and document the existing structural and architectural condition of those structures. The intent of this report is to document the condition of such structures before construction, obtain agreement with the property owner, and use for comparison purposes after construction is completed, to ensure the structure was not damaged from construction activities. Blasting will only be considered if rock excavating equipment equal to or better than that provided by "drum-cutters" (see www.drumcutters.com), would not be effective for excavation.

46. PATENTS, COPYRIGHTS, AND ROYALTIES

- A. The Contractor shall assume all costs arising from the use of any patented article, material, device, equipment or process used or furnished by him in connection with, or incorporated in the Project. The Contractor shall save, and hold harmless the City and all officers and agents thereof from all damages, costs and expenses in law or equity (including attorneys' fees, expert witness fees, court costs, and other expenses of litigation) that may come at any time, arise or be set up by reason of any infringement or alleged infringement of any patent rights as a consequence of the installation or use of any such article, material, device, equipment or process in or about the Project. The Performance Bond required by Arizona Revised Statutes Section 34-221 shall be deemed to apply expressly to this provision of the Contract.
- B. Should the Contractor, his agent, employer or any of them be enjoined from furnishing or using any invention, article, material or plans supplied or required to be supplied or used under this Contract, the Contractor shall promptly pay such royalties and secure the requisite licenses; or, subject to acceptance by the City, substitute other articles, materials or appliances in lieu thereof which are of equal efficiency, quality, finish, suitability and market value to those

planned or required under the Contract. Descriptive information of these substitutions shall be submitted to the Engineer for determination of general conformance to the Design concept and the Construction Contract. Should the City elect to refuse a substitution, the Contractor agrees to pay such royalties and secure such valid licenses as may be requisite for the City, his representatives, agents and employees or any of them, to use such invention, article, material or appliance without being disturbed or in any way interfered with by any proceeding in law or in equity on account thereof.

47. CHANGE ORDERS FOR CHANGED OR EXTRA WORK

- A. The City reserves the right at any time during the progress of the Work to make necessary alterations of, deviations from, additions to, or deletions from the Contract, or may require the performance of extra Work neither covered by the specifications nor included in the Proposal, but forming a part of the Work contracted for; provided however, the Contractor shall not proceed with any such change or extra Work without a written Change Order approved by the City. Until a resolution is reached by the City and the Contractor, the Contractor is to continue work on the project. Additional time may or may not be added to the projected (and approved) contract end date. Such changes or extra Work shall in no way injuriously affect or invalidate the Contract or the Contractor's bond, but the difference in cost shall be added to or deducted from the amount of the Contract, as the case may be. Adjustments, if any, in the amounts to be paid to the Contractor by reason of any such change or extra work shall be determined by one of the following methods in the order as listed:
1. Method A Unit prices contained in the Contract Documents for the same type or class of work.
 2. Method B By an acceptable unit price proposal from the Contractor.
 3. Method C By an acceptable lump sum price proposal from the Contractor.
 4. Method D If neither Method "B" or "C" can be agreed upon before the change or extra work is started, then the Contractor shall be paid the "actual field cost" of the work plus eighteen percent (18%) or twelve percent (12%) as stated herein below.
- B. Whenever any change or extra work is to be done, for which unit prices for the same type or class of work are contained in the Contract Documents, such work shall be done and shall be measured and paid for pursuant to Method A herein above set forth and the other applicable portions of the Contract Documents, subject to Article 30 of the General Conditions. Full compensation for taxes, overhead and other costs shall be considered as included in the unit prices bid.
- C. Methods B and C shall include an itemized cost breakdown including overhead and profit. In determining the amount payable to the Contractor, an additional five percent (5%) may be added to the amount payable to a Subcontractor, but no "pyramiding" or additional percentage shall be authorized for any work done by a Subcontractor. This percentage may be increased to seven percent (7%) if the Contractor provides proof that it is paying transaction taxes for the subcontractor. The subcontractor percentage shall be considered as compensation for taxes paid on the subcontracted work, and any other costs or profit associated the subcontracted work. The taxes shall not be separately shown as a cost in the amount to which the seven percent (7%) is applied. Full compensation for taxes, overhead and other costs shall be considered as included in the unit price or lump sum price accepted whether such items are explicitly itemized or not.

- D. When any change or extra work is performed under "Method D", the term "actual field cost" of such change or extra work is hereby defined to be and shall include:
1. The actual wages paid to all the Contractor's workmen such as foremen, equipment operators, mechanics, and laborers, for the time actually performing the change or extra work. Superintendents are considered as compensated for in the overhead.
 2. All of the Contractor's materials and supplies incorporated in the change or extra work, unless the total cost for a particular material or supply is less than twenty dollars (\$20). Materials and supplies with a total cost of less than twenty dollars (\$20) will be considered as compensated for in the overhead and profit allowance.
 3. All machinery and equipment for the time actually employed or used in the performance of the changed or extra work shall be based on the submitted and approved schedule of equipment rates, unless the hourly cost for the machinery or equipment is less than twenty-five dollars (\$25.00) per hour or one hundred fifty dollars (\$150) per day. Items with rates less than twenty-five dollars (\$25.00) per hour or one hundred fifty (\$150) per day will be considered as compensated for in the overhead and profit allowance. The contractor shall submit machinery and equipment rates for approval prior to Start of Construction.
 4. Any transportation charges necessarily incurred in connection with any equipment authorized by the City for use on said change or extra work, but which is not already on site provided the transportation cost exceeds twenty-five dollars (\$25.00).
 5. All power, fuel, lubricants, water, and similar operating expenses as well as other expendable materials.
 6. Incidental expenses incurred as a direct result of such change or extra work, including payroll taxes and a pro rata portion of premium in the Performance Bond and Labor and Materials Payment Bond, and where the premiums therefore are based on payroll costs, on Public Liability and Property Damage insurance, Workmen's Compensation insurance, and Occupational Disease Disability insurance, Builder's Risk, and other insurance required by the Contract. **In order to be allowed these amounts shall be provided in writing when submitting the first request for a progress payment. These amounts payable by the City shall not change for the duration of the contract. The twelve percent (12%) mark-up shall not apply to these items.**
 7. No repairs, replacements, or other forms of overhead expense shall be included in "actual field costs".
 8. The Engineer may adjust the amount due under this method based upon a reasonable estimate of the actual cost of performing deleted work in the case of a change in work method or work material. In this case the amount due shall be the difference between the estimated cost to perform work per the original method based on conditions known at the time of the change to the extent such conditions are not the basis for a change, and the method proposed to be used plus the unit bid price for the original method.
- E. The Engineer may direct the form in which the accounts of the actual field costs shall be kept and may also specify in writing, before the work commences, the method of doing the work and the type and kind of machinery and equipment, if required, which shall be used in the performance of any change or extra work under method "D". In the event that machinery and heavy construction equipment are required for such change or extra work, the authorization and basis of payment for the use thereof shall be stipulated in the written Change Order.
- F. The twelve percent (12%) or eighteen percent (18%) of the "actual field cost" to be paid to the Contractor shall cover and be full compensation for the Contractor's profits, overhead, superintendence, and field and home office expense, and all other elements of cost not

embraced within the "actual field cost" as defined herein. Eighteen percent (18%) shall be payable for Contractor costs for that portion of total change orders less than or equal to thirty thousand dollars (\$30,000). For that portion exceeding thirty thousand dollars (\$30,000) the twelve percent (12%) factor shall be applied to Contractor costs. In determining the amount payable to the Contractor, an additional percentage per C above may be added to the amount payable to a Subcontractor, but no "Pyramiding" or additional percentage shall be authorized for any work done by Subcontractors.

- G. No claim for any change or extra work of any kind shall be allowed unless the work is ordered and approved in writing by the City in the form of a Change Order.
- H. No anticipated profits shall be allowed for work deleted.
- I. If the City has work accomplished by other sources due the Contractor's failure to perform required work it may deduct an additional five hundred dollars (\$500) or five percent (5%) of the cost of accomplishing the work, whichever is greater, in addition to the cost of accomplishing the work using other sources. The City shall consider this additional amount as compensation for overhead and administration.
- J. The Contractor shall furnish satisfactory bills, payrolls, and vouchers covering all items of cost and when requested by the City, give the City access to accounts relating thereto.
- K. Any Change or extra work shall be considered a part of the Contract, subject to all of its terms, conditions, stipulations, review, guaranties, and tests may be performed without notice to the surety on the Contractor's bond. The Contractor and surety hereby agree to these provisions.
- L. The following language shall apply to all change orders:
"THIS CHANGE ORDER CONSTITUTES FULL, FINAL, AND COMPLETE COMPENSATION TO THE CONTRACTOR FOR ALL COSTS, EXPENSES, OVERHEAD, PROFIT, AND ANY DAMAGES OF EVERY KIND THAT THE CONTRACTOR MAY INCUR IN CONNECTION WITH THE WORK DESCRIBED IN THIS CHANGE ORDER, INCLUDING ANY IMPACT ON THE DESCRIBED WORK OR ON ANY OTHER WORK UNDER THE CONTRACT, ANY CHANGES IN THE SEQUENCES OF ANY WORK, ANY DELAY TO ANY WORK, ANY DISRUPTION OF ANY WORK, ANY RESCHEDULING OF ANY WORK, AND ANY OTHER EFFECT ON ANY OF THE WORK UNDER THIS CONTRACT. BY THE EXECUTION OF THIS CHANGE ORDER, THE CONTRACTOR ACCEPTS THE CONTRACT PRICE CHANGE AND THE CONTRACT COMPLETION DATE CHANGE, IF ANY, AND EXPRESSLY WAIVES ANY CLAIMS FOR ANY ADDITIONAL COMPENSATION, DAMAGES OR TIME EXTENSIONS, IN CONNECTION WITH THE DESCRIBED WORK."
- M. The Contractor shall not be entitled to adjustments in contract price or contract time related to submittal of any cost estimates.

48. PROCEDURE FOR REQUESTING CHANGE ORDERS –EXTRA

- A. In case any instructions, either oral or written, appear to the Contractor to involve a change or extra work for which, in his opinion, he should receive extra compensation, he shall make a written request to the Engineer for a written Change Order authorizing such change or extra work. Should a difference of opinion arise as to what does or does not constitute a change or

extra work, or concerning the payment thereof, and the City insists on conformance, the Contractor shall proceed with the work after presenting written notice of claim for extra cost to the City and shall keep an accurate account of the "actual field cost" thereof as provided for in Method "D" under "Changed or Extra Work". The Contractor shall thereby not waive any right he might have to compensation for the claimed "extra cost" in connection with a change or extra work. The matter shall be submitted to the City for final determination as to whether or not a change or extra work was involved, and if so, the amount due to the Contractor.

- B. Any claims for extra cost pursuant to this section, together with supporting documents and receipts, must be filed within ten (10) consecutive calendar days after performing the work for which extra cost is claimed. The City shall have the right to reject any claim for extra cost if the foregoing procedure is not followed.
- C. In giving instructions, the Engineer shall have the authority to make minor changes that do not involve extra cost or time of performance and are not inconsistent with the design concept and purposes of the contracted work; but otherwise, except in an emergency endangering life or property, no change or extra work shall be performed unless authorized by a written "Change Order" approved by the City Council or its designee in accordance with the City Code, and no claim for extra cost shall be valid unless so approved, except as otherwise provided herein.

49. PROCEDURE FOR REQUESTING CHANGE ORDERS--EXTRA TIME

- A. The Contract time may be changed only by a change order either alone or in conjunction with other changes. Any claim for an extension of Contract time shall be based on written notice delivered to the Engineer within seven days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless Engineer allows an additional period of time to ascertain more accurate data. Notice of the extent of the claim must state the cause of the delay, the date of occurrence causing the delay, and the amount of additional time requested. Requests for extensions of time shall be supported by all evidence reasonably available or known to the Contractor, which would support the extension of time requested. If the Contractor is requesting an extension of time because of weather, he shall supply daily written reports to the Engineer describing such weather and the work which could not be performed that day because of such weather or conditions resulting there from and which he otherwise would have performed. The Engineer's acceptance of the daily reports shall not be deemed an admission of the Contractor's right to receive an extension of time or waiver of the City's right to strictly enforce the time provisions contained in the Contract Documents. Requests for extensions of time failing to include the information specified in this Article and requests for extension of time which are not received within the time specified above shall result in the forfeiture of the Contractor's right to receive any extension of time requested. Any change in the Contract time resulting from any such claim shall be incorporated in a change order. The percentages specified in Section 38 and 47 G above shall be considered to include full compensation for each day or portion thereof of extra time.
- B. The Contract time will be extended in an amount equal to time loss due to delays beyond the control of Contractor if a claim is made there for as provided in paragraph A. Such delays shall include, but not be limited to, acts or neglect by City or others performing additional work, or to fires, floods, labor disputes, epidemics, abnormal weather conditions, or act of God. No extension of the Contract time will be granted where the delay is attributable to a Subcontractor, manufacturer, fabricator, supplier or distributor or any other party performing

services or furnishing material or equipment on behalf of the Contractor unless such party's delay is attributable to one of the above enumerated causes. Time limits concerning substantial completion and final completion as stated in the Contract Documents are of the essence.

- C. An extension of time may be granted by the City after the expiration of the time originally fixed in the Agreement or as previously extended, and the extension so granted shall be deemed to commence and be effective from the date of such expiration. However, such extension shall not be deemed to be a release of any of the City's rights under the Contract Document unless expressly stated as such.

50. DIFFERING SITE CONDITIONS

If conditions or objects are encountered at the site which are (1) sub-surface or otherwise concealed and which differ materially and substantially from those indicated or anticipated in the Contract Documents or (2) are of an unusual nature, which differ materially and substantially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice, in writing, by the Contractor shall be given to the City promptly before conditions are disturbed and in no event later than 24 hours after first observance of the conditions. The City shall promptly investigate such conditions and, if they differ materially and substantially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the work, shall provide an equitable adjustment in the Contract Amount or Contract Period, or both as per Sections 47 through 49 of these General Conditions. If the City determines that the conditions at the site are not materially and substantially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the City shall so notify the Contractor in writing, stating the reasons. No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment has been made under this agreement. Weather, and the effects of weather on surroundings, surface, or subsurface are to be anticipated and do not constitute a differing condition. No contract change, which results in a benefit to the Contractor, shall be allowed unless the contractor has provided the required written notice. No contract adjustment will be allowed under this section for any effects caused on unchanged work.

51. WARRANTY PERIOD

- A. Besides guarantees required elsewhere, the Contractor shall and hereby does guarantee all work for a period of two (2) years after the date of final acceptance of the work by the City and shall repair and replace any and all work together with any other work, which may be displaced in so doing, that may prove defective in workmanship or materials within the two-year period from the date of final acceptance, without expense whatsoever to the City, ordinary wear and tear and unusual abuse or neglect excepted. If the Contractor is required to repair or replace any portion of the Project pursuant to the two-year guarantee provided by this section, the repair or replacement shall similarly be guaranteed for an additional one-year period from the date of completion of the repair. In the event of failure to comply with the above mentioned conditions, within a week (seven consecutive days) after being notified in writing by the City, the City is hereby authorized to proceed to have the defects repaired and made good at the expense of the Contractor, who hereby agrees to pay the cost and charges therefore immediately upon demand by the City. In case of emergency, where, in the opinion of the City, delay could cause serious loss or damage, repairs may be made without notice being sent to the Contractor and the expenses in connection therewith shall be charged to the Contractor.

- B. The Contractor guarantees to the City that all materials and equipment furnished under this Contract will be new and of good and sufficient quality, free from faults and defects as is necessary to complete the project as required by the plans and specifications.
- C. The City and the Contractor agree that the guarantee on the equipment possessed and used by the City, in accordance with Article 34 of these General Conditions, shall commence on the date that the City takes possession of the equipment and so notifies the Contractor in writing. City and Contractor further agree that such taking possession and use shall not be deemed as acceptance of any part of the work. Take-over of equipment may occur when such equipment can be put into routine service on a permanent basis at City's discretion.

52. AUTHORITY OF ENGINEER

- A. The Engineer shall furnish engineering services during construction of the work to the extent provided in the Contract Documents. He shall observe and review the work in the process of construction or erection. Compliance with the Contract Documents shall be the Contractor's responsibility notwithstanding such observation or review. The Engineer has authority to recommend suspension of the work when it appears such suspension may be necessary to accomplish the proper implementation of the intent of the Contract Documents. The authority to observe, review, or recommend suspension of all or any portion of the work, or exercise such other authority as may be granted by the Contract Documents, shall not be construed or interpreted to mean supervision of construction, which is the Contractor's responsibility, nor make the Engineer responsible for providing a safe place for the performance of work by the Contractor or by the Contractor's employees or those of suppliers or subcontractors or for access, visits, use, work, travel, or occupancy by any other person. The provisions of MAG Sections 104.1.4 and 104.2.5 as contained in the 2012 edition apply to this contract.
- B. The Engineer shall have authority to reject any or all work, materials, or equipment, which do not conform to the Contract Documents, and to decide technical questions, which arise in the execution of the work. The Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work, materials, equipment, and supplies which are to be paid for under the Contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as otherwise expressly provided. In case any question shall arise between the parties to the Contract relative to the Contract Documents, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under the Contract affected in any manner or to any extent by such question.

53. DECISIONS OF THE CITY

If the Contractor is not in agreement with any final decision of the Engineer, then he may appeal, in writing, such decisions to the City Manager, who shall within a reasonable time after presentation, make decisions in writing on claims properly made by the Contractor. The appeal shall contain the final decision of the Engineer as an attachment, or in the absence of such final decision a copy of a certified letter sent to the Engineer, at least fifteen (15) working days prior to the appeal, requesting such a final decision in writing. The decision of the City Manager shall be regarded as final.

54. TEMPORARY SUSPENSION OF THE WORK

- A. The City Manager may, upon the recommendation of the Engineer, or by the Manager's own determination, suspend the work.
- B. Should the discovery of a potential archaeological or historic resource occur during construction, the Contractor shall cease work at that site, immediately notify the Engineer, and shall not proceed until instructed to do so by the City. In the event such a suspension of the work occurs, the provisions of Article 49 shall apply to extend the time for final completion of the work.

55. AUTHORITY AND DUTIES OF CITY'S FIELD REPRESENTATIVE

- A. Inspectors may be placed on the work to keep the City informed as to the progress of the work and the manner in which it is being done; to keep records; act as liaison between the Contractor and the City; and to call the attention of the Contractor to any deviations from the Contract Documents. However, failure of the inspector to call the attention of the Contractor to faulty work or deviations from the Contract Documents shall not constitute acceptance of said work.
- B. The inspector cannot control how the material is used; therefore, the responsibility for its safety and proper use shall be the Contractor's. Until the job is finally completed, the Contractor may do work that changes or modifies work previously done, and even though at any given time, a piece of work might be well done and acceptable in quality, the responsibility for keeping it in that condition until the work is complete is the sole responsibility of the Contractor. For this reason, it is impossible to accept, finally, any portion of a project until the project as a whole is accepted and control of said project is transferred from the Contractor by final official written acceptance by the City.
- C. Any personal assistance which an inspector may give the Contractor will not be construed as the basis of any assumption of responsibility in any manner, financial or otherwise, by the inspector or the City.**
- D. The inspector is not and does not purport to be a Safety Engineer and is not engaged in that capacity by the City and shall have neither authority nor the responsibility to enforce construction safety laws, rules, regulations, procedures, or the safety of persons on and about the construction site.
- E. The presence or absence of an inspector on any job will be at the sole discretion of the City, and such presence, or absence of an inspector will not relieve the Contractor of his responsibility to obtain the construction results specified in the Contract Documents.
- F. The inspector is not authorized to approve or accept any portion of the work or to issue instructions contrary to the Contract Documents. Approvals, acceptance or instructions, when given, must be in writing and signed by the City. The inspector shall have authority to reject defective materials; however the failure of the inspector to reject defective material or any other work involving deviations from the Contract Documents shall not constitute acceptance of such work.

- G. Nothing in this subsection shall in any way be so construed as to require or to place responsibility for the method, manner or supervision of the performance of the work under this Contract upon the inspector, or the City. Such responsibility rests solely with the Contractor.

56. CHARACTER OF WORKERS, METHODS, AND EQUIPMENT

- A. The Contractor shall at all times employ sufficient skilled labor in accordance with Federal, State and local labor laws; and the proper equipment for completing the project in the manner and time required by the Contract. All equipment, which is proposed to be used on the project, shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be used such that it will not damage property adjacent to the work area.
- B. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed from the work by the Contractor or Subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer. Should the Contractor or Subcontractor fail to remove such person as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until such orders by the Engineer are followed by the Contractor. The Contractor or Subcontractor shall hold the City harmless from damages or claims for compensation that may occur in the enforcement of this section.
- C. The City may require submittal of Certified Payrolls at any time from the Contractor showing the employee names, addresses, Social Security Numbers, rates of pay, payments received, payroll deductions, occupational classification(s), and hours per day worked in such classification(s) for work performed on this project by employees. The contractor shall retain such records for the minimum time required by law or three (3) years after project completion, whichever is longer. The Contractor shall also be responsible to produce upon request from the City such payroll records from its subcontractors.

57. WARRANTY OF COMPLIANCE WITH STATE AND FEDERAL LAW

CONTRACTOR understands and acknowledges the applicability to it of the Americans with Disabilities Act, the Immigration Reform and Control Act of 1986 and the Drug Free Workplace Act of 1989. CONTRACTOR must also comply with A.R.S. § 34-301, "Employment of Aliens on Public Works Prohibited," and A.R.S. § 34-302, as amended, "Residence Requirements for Employees."

- A. Under the provisions of A.R.S. § 41-4401, CONTRACTOR hereby warrants to CITY that CONTRACTOR and each of its subcontractors will comply with, and are contractually obligated to comply with, all Federal Immigration laws and regulations that relate to their employees and A.R.S. § 23-214(A) (hereinafter "Contractor Immigration Warranty").
- B. A breach of the Contractor Immigration Warranty shall constitute a material breach of this contract and shall subject CONTRACTOR to penalties up to and including termination of this contract at the sole discretion of CITY.
- C. CITY retains the legal right to inspect the papers of any contractor or subcontractor employee who works on this contract to ensure that the contractor or subcontractor is complying with the

Contractor Immigration Warranty. CONTRACTOR agrees to assist CITY in regard to any such inspections.

- D. CITY may, at its sole discretion, conduct random verification of the employment records of CONTRACTOR and any subcontractors to ensure compliance with Contractor's Immigration Warranty. CONTRACTOR agrees to assist CITY in regard to any random verification performed.
- E. Neither CONTRACTOR nor any subcontractor shall be deemed to have materially breached the Contractor Immigration Warranty if CONTRACTOR or any subcontractor establishes that it has complied with the employment verification provisions prescribed by sections 274A and 274B of the Federal Immigration and Nationality Act and the E-Verify requirements prescribed by A.R.S. § 23-214, Subsection A.
- F. The provisions of this article must be included in any contract that CONTRACTOR enters into with any and all of its subcontractors who provide services under this contract or any subcontract. "Services" are defined as furnishing labor, time or effort in the State of Arizona by a contractor or subcontractor. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property.

58. QUALITY CONTROL AND TESTING

- A. The Contractor will support the Testing Company when contracted by the City for Quality Control and testing for specification compliance and assurance.
- B. During the progress, the work shall be subject to the review and observation of the City. The Contractor shall afford every reasonable facility and assistance to the City to make such review. If any work is covered up without approval or consent of the City, it will be uncovered for examination at the Contractor's expense.
- C. The fact that the City is on the job site shall not be taken as an acceptance of the Contractor's work or any part of it. The Contractor shall notify the City upon completion of his Contract, and the work shall be given final construction review by the City, and any tests and re-tests shall be witnessed by the City or his representative. If all parts of the work are acceptable and substantially comply with the intent of the Contract Documents, initial acceptance shall be made by the City. If parts of the work are not acceptable and require additional work or rework by the Contractor to complete the Project, such costs shall be borne by the Contractor.
- D. Contractor shall submit to the City, ten (10) days in advance of construction and without charge, samples or specifications of materials he proposes to use and shall not use these materials until he has received approval from the City.
- E. Contractor shall furnish tests and reports on tests of all materials, equipment and installations called for in the Contract Documents. The testing laboratory must be approved by the City and the Contractor shall pay the cost of the tests, and necessary re-tests, including all transportation charges unless otherwise provided by the Contract Documents.
- F. Required certificates of inspection, testing, or compliance shall be secured by the Contractor and promptly delivered by him to the Engineer. Certificates shall be provided within five (5)

working days after the test is conducted. Each report shall indicate compliance with the specifications.

- G. The City reserves the right to perform additional inspections and testing deemed appropriate with their own forces or with outside consultants or testing agencies. Should such inspection or testing reveal work that is not in compliance with Contract Documents, such costs of inspection or testing, and any required rework shall be borne by the Contractor.
- H. Following is a summary of minimum frequency of testing the city shall require. If there are conflicts in the frequency of testing between this Section and the Technical Specifications, the stricter of the two will govern. This list is a partial list of major items of work, if an item is a part of the project and not listed the Contractor shall provide testing for that item. The Contractor shall provide the appropriate tests for the activities a part of the project. The City reserves the right to request a greater frequency for the testing.

The following frequencies are based on a maximum of 8” lifts. When the lifts are greater than 8”, the frequency of testing shall increase proportionately with the increased depth of lift.

Activity	Frequency
Roadway Fills	1 each 300 ft per lift
AB Subgrade	1 each 300 ft per lift
AC Pavement	1 each 300 ft per lift
Trench Backfill	1 each 300 ft per lift
Concrete Curb & Gutter	4 cylinders per 50 cy concrete
Concrete Sidewalk	4 cylinders per 50 cy concrete

59. TERMINATION OF CONTRACT

- A. The City may, at any time, terminate the Contract at the City’s convenience and without cause. Such termination shall be effective upon receipt by Contractor of written notice from the City of such termination for the City’s convenience. Contractor shall cease operations as directed by the City in the notice of termination and take actions necessary, or that the City may direct, for the protection and preservation of the work. In the event of a termination for convenience, the Contractor shall be paid only the direct value of its completed work and materials supplied as of the date of termination, and Contractor shall not be entitled to anticipated profit or anticipated overhead or any other claim of damages from the City. Further, in the event a termination of the Contractor for cause is determined to have been without legal right, then the termination shall be deemed to have been a termination for convenience.
- B. If the Contractor refuses or fails to prosecute the work or any separable part thereof with such diligence as will ensure its completion within the time specified herein, or any extension thereof granted in the manner specified herein, or fails to complete the work within such time, or if the Contractor fails to comply with any written order of the Engineer or the City or fails to timely pay Subcontractors, material, men, or laborers, or if the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he or any of his Subcontractors should violate any of the provisions of the Contract, then the City may serve written notice upon the Contractor and his surety of its intention to terminate the Contract and, unless within ten (10) days after the service of such notice such violations of the Contract cease

and satisfactory arrangements for the corrections thereof are made, the Contract shall without further notice, upon the expiration of said ten (10) days or such extensions thereof as may be expressly granted by the City in writing, cease and terminate.

- C. In the event of any such termination, the Contract shall be deemed terminated and not rescinded. Following such termination of the Contract, the City will take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Project by whatever method the City may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished, or completion is permanently suspended by the City. If the unpaid balance of the Contract price exceeds the direct and indirect costs of completion of the project, including compensation for additional professional service, including but not limited to fees charged by the City's attorney, such excess shall be paid to the Contractor. If such costs or liquidated or actual damages as provided by this Contract exceed such unpaid balance, the Contractor shall pay the difference to the City. Such additional costs and any liquidated or actual damages due to the City under this Contract will be determined by the City Manager and be submitted to the City Council in the form of a Change Order to the Contract.
- D. Any extensions of time granted by Change Order or other extensions granted by the Council do not constitute a waiver of the City's right to terminate the Contract pursuant to this section for the Contractor's failure to complete the Project within the time specified in the Contract and any authorized extensions thereto, nor do such extensions constitute a waiver of the City's right to collect liquidated damages.
- E. If the work is stopped by order of a court, public authority, or the City for a period of ninety (90) calendar days or more, through no act or fault of the Contractor, anyone employed by such Contractor or his Subcontractors, then the Contractor may terminate the Contract in accordance with these Contract Documents.

60. TIME IS OF THE ESSENCE

It is mutually understood and agreed by and between the parties to the Contract that in the execution of the same, time is an essential element of the Contract, and it is important that the work progress vigorously to completion.

61. LIQUIDATED DAMAGES

For each and every calendar day that work shall remain uncompleted after the time specified for the completion of the work in the Contract, or as adjusted by a change order, the sum per calendar day, as stipulated in the Advertisement for Bids, shall be deducted from any money due or to become due to the Contractor, not as forfeit or penalty, but as liquidated damages. This sum is fixed and agreed upon between the parties because the actual loss to the City and to the public caused by delay in completion will be impractical and extremely difficult to ascertain and determine. It is agreed that the City has made a good faith attempt to estimate the loss caused by any delays and that the estimate is incorporated in the sum, which is agreed to be reasonable. If the City allows the Contractor to complete or attempt to complete the work subsequent to the date of completion specified herein, such action shall not constitute a waiver by the City of the imposition of the liquidated damages provision as specified herein.

62. CITY'S REMEDIES CUMULATIVE AND NONWAIVER

No right or remedy conferred upon or reserved to the City by the Contract shall be considered exclusive of any other remedy or contractual right, but the same shall be distinct, separate, and cumulative, and shall be in addition to every other remedy existing at law or in equity or by statute; and every remedy given by the Contract to the City may be exercised from time to time as often as the occasion may arise, or as may be deemed expedient. No delay or omission on the part of the City to exercise any right or remedy arising from any default on the part of the Contractor shall impair such right or remedy or shall be construed to be a waiver of any such default or an acquiescence thereto, or otherwise affect the right of the City to enforce the same in the event of any subsequent breach or default by the Contractor.

63. SEVERABILITY CLAUSE, DISPUTE RESOLUTION, APPLICABLE LAW

- A. This Contract shall be governed by the laws of the State of Arizona, and venue for any litigation arising out of this Contract shall be in the Superior Court of the State of Arizona in and for the County of Coconino or the County of Yavapai, depending upon the location of the work, if the amount in dispute is in excess of \$5,000.00. If the amount in dispute is less than \$5,000.00, jurisdiction and venue shall lie in the nearest Justice of the Peace Court of the appropriate county. Arbitration shall not be an alternative method of settling disputes unless separately agreed upon in writing by the parties. This Contract shall not be construed to create any contractual relationship of any kind between the Engineering Dept., and the Contractor or any Subcontractor, or between the City and any Subcontractor. During any dispute arising hereunder, the Contractor shall continue to perform all work in accordance with the Contract Documents. In the event of any dispute arising hereunder, the prevailing party in the resolution of such dispute shall be entitled to recover its attorney's fees and costs incurred.
- B. The provisions of this Contract shall be deemed to be severable, and if any term, phrase or portion of the Contract shall be determined to be unlawful or otherwise unenforceable, the remainder of the Contract shall remain in full force and effect.
- C. Any and all disputes relating to this Contract shall be subject to the provisions of Chapter 3.10 of the Sedona City Code. The City Code can be viewed on the City of Sedona website, as well as, the City Clerk's Office, City Hall, Sedona, Arizona.
- D. Notwithstanding the mediation provisions set forth in Paragraph 62.C above, either party may submit, by demand letter, correspondence or notice, to the other party, any claim, counterclaim, dispute or other matter in question between the Contractor and the City arising out of or relating to this Contract, the Contract Documents, the Plans, the Project or the work, or breach thereof, and such claim, counter claim, dispute or other matter in question shall be subject to and decided by arbitration in accordance with the Rules for Non-Administered Arbitration of Business Disputes (the "Rules") of the Center for Public Resources ("CPR") currently in effect, except as provided herein and except where modified by the provisions hereof.
- E. Any arbitration arising out of this Contract, the Contract Documents, the Plans, the Project or the work, or any breach thereof may include, by consolidation or joinder, or in any other manner, at the discretion of either the Contractor or the City, any other entities or persons whom the Contractor or the City, as the case may be, believes to be substantially involved in a common question of law or fact.

- F. All demands for arbitration and all responses thereto that include any monetary claim, must contain a statement that the total sum or value in controversy as alleged by the party making such demand or response is not more than \$150,000.00 (exclusive of interest and arbitration fees and costs). The arbitrators will not have jurisdiction, power or authority to consider or make findings except the denial of their own jurisdiction concerning any controversy where the amount at issue is more than \$150,000.00 (exclusive of interest and arbitration fees and costs) or to render a monetary award in response thereto against any party which totals more than \$150,000.00 (exclusive of interest and arbitration fees and costs). Notwithstanding the foregoing provisions, the parties may mutually agree to waive the jurisdictional limitations set forth in this sub-paragraph. In the event of such mutual waiver, all other provisions in this sub-paragraph shall apply.
- G. Demand for arbitration shall be filed with the other party in accordance with Rules. A demand for arbitration shall be made within a reasonable time after the claim, dispute, or other matter in question has arisen. In no event shall the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question could be barred by the applicable statute of limitations.
- H. In the event the amount in controversy is less than \$50,000.00 a sole arbitrator shall be appointed in accordance with Rules. In the event the amount in controversy is \$50,000.00, the demanding party shall appoint one party-appointed arbitrator in its notice demand for arbitration. The responding party may within ten (10) days, appoint a second party-appointed arbitrator. The party-arbitrators shall appoint a third arbitrator in accordance with the Rules. If the party-arbitrators fail to appoint a third arbitrator, the third arbitrator shall be appointed in accordance with the Rules. If the responding party fails to appoint a second party-appointed arbitrator within the time so provided, selection of the second arbitrator shall be in accordance with the Rules.
- I. The decision of the arbitrators shall be in accordance with laws of the State of Arizona and the United States. The arbitrators shall prepare written findings of fact and conclusions of law upon which the decision and award shall be based. The arbitrators may award compensatory damages and attorneys' fees and costs to the prevailing party. The arbitrators shall have no authority to award consequential damages or punitive damages, and the parties hereby waive any claim to those damages to the fullest extent allowable by law.
- J. The demanding party shall select the locale of arbitration, but shall not choose a location greater than twenty-five (25) miles from the Project site.
- K. This agreement to arbitrate shall be specifically enforceable by either party under the prevailing laws of the State of Arizona and the United States. Any award rendered by the arbitrators shall be final and enforceable by any party to the arbitration, and judgment shall be made upon it in accordance with the applicable laws of any court having jurisdiction thereof. The arbitrators' decision shall be final and conclusive as to the facts. Either party may appeal manifest errors of law to a court of competent jurisdiction within fifteen (15) days of the award.
- L. Unless otherwise agreed in writing, and notwithstanding any other rights or obligations of either of the parties under the Contract, the Contractor and the City shall carry on with the performance of their respective duties, obligations and services hereunder during the pendency of any claim, dispute or other matter in question giving rise to arbitration or mediation, as the case may be. The City shall be under no obligation to make payments to the Contractor on or

against such claims, disputes or other matters in question giving rise to arbitration or mediation, during the pendency of such arbitration or mediation or other proceedings to resolve such claims, disputes or other matters in question.

64. POTHOLING REQUIREMENTS

The Contractor shall pothole all existing utilities 1,000 feet ahead of trenching activities to allow adequate time and distance to allow for the adjustment of grade or location of the construction activities. The contractor shall pothole at least two (2) working days ahead of installing facilities such as manholes, sidewalks, storm drainage inlets, footing, headwalls, and similar non-longitudinal installations. The Contractor shall backfill the pothole after verifying the depth, size and location of the utility. If a potential conflict is encountered, temporarily plating the potholed utility will be allowed for review and coordination of a resolution of the conflict with the City and affected utilities representatives.

The City requests a minimum of five (5) working days notification of a potential conflict for marked utilities. This requirement does not relieve the Contractor of the responsibility to make the City aware of conflicts timely of the Contractor's awareness. If potholing 1,000 feet in advance of trenching activities has not been kept up and a conflict creates down time or delays in work no extension of time or compensation for down time will be considered for that conflict.

65. UNMARKED UTILITY REPAIR

If in the course of work, a conflicting utility line that was not shown on the plans is discovered, the Contracting Agency will either negotiate with the owner of the Utility for relocation, change the alignment and grade of the trench or roadbed, provide encasement or sleeving, relocate the utility, or as a last resort, declare the conflict as "extra work" to be accomplished by the Contractor in accordance with Section 47 of these General Specifications. In the case of unmarked or incorrectly marked utilities the Contractor shall consider that responsibilities are per Arizona State Statutes Section 40 –360.

The Contractor shall contact the City and utility affected immediately upon damaging or breaking an unmarked utility. If an unmarked utility is found the Contractor shall take every precaution to not damage the utility and work around the conflict with the City and Utility representatives. No interpretation of this provision that changes the responsibility for non-located and improperly located utilities per Arizona State Statutes Section 40 –360 shall be valid.

66. UTILITY SEPARATION

The Contractor shall maintain as a minimum one (1) foot of vertical clearance and three (3) feet of horizontal clearance for all utility crossings. Water/sewer minimum separations will be two (2) feet vertical clear and six (6) feet horizontal clear. If less than one (1) foot but more than six (6) inches clearance is all that can be accommodated concrete encasement shall be provided.

67. NOTIFICATION TO RESIDENTS & COMMUNITY RELATIONS

The Contractor shall inform the residents along the construction area of the proposed work. This notification and community relations shall include, but not necessarily be limited to:

A. Mailings

The Contractor shall prepare a letter for mailing to the residents located adjacent to the project. This mailing will include a description of work to be done, work hours, date's for begin and end construction, Contractor representative contact name and phone number. The cost for the mailings shall be incidental to the project.

B. Informational Signage

The Contractor shall provide and install advance information signs and project information signs before beginning construction to inform the public of the forthcoming project, construction dates, and suggested alternate routes. Sign layout shall be as approved by the Engineer. Signs shall not be constructed or installed prior to approval by the Engineer for the designs, sizes and locations. The Contractor shall maintain the signs as necessary and update the information as requested by the Engineer. The information signs shall be shown on the traffic control plan. The cost for this work shall be included in the unit bid price for Mobilization.

C. Meetings

The Contractor may be requested to attend and participate in a pre-construction public meeting if deemed necessary by the Engineer. Meeting time, location and agenda will be determined by the Engineer. The cost for this meeting if held shall be incidental to the project.

D. Driveway impact notification

The Contractor shall notify any resident or business of any access restrictions at least 48 hours prior to access restriction. Notification to residents is considered incidental to the projects activities and included in the unit price of the various activities.



City of Sedona
SR179 Sewer Main Upsize

Technical Specifications
SEI Project No. 06831 November 21, 2019

TECHNICAL SPECIFICATIONS

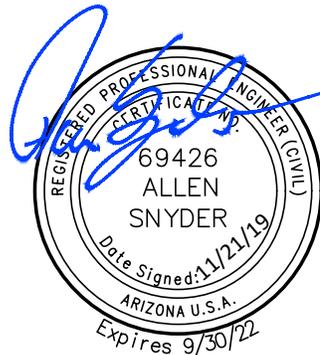
For the
City of Sedona

SR179 Sewer Main Upsize



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FOR
TECHNICAL SPECIFICATIONS**

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00700.1 GENERAL SPECIFICATIONS/PROJECT REQUIREMENTS

All items of work and associated construction requirements are adequately described and defined in the Uniform Standard Specifications for Public Works Construction sponsored and distributed by the Maricopa Association of Governments (MAG) along with the MAG Uniform Standard Details, latest revisions, and City of Sedona (Sedona) Specifications or Standards and within these special provisions. Copies of the Standard Specifications may be obtained from the Maricopa Association of Governments, 1820 W. Washington Street, Phoenix, AZ 85007 (602) 254-6308.

The information written into these special provisions will:

1. Describe any special or unusual conditions.
2. Explain details of the work not covered in the MAG Specifications and Standard Details.
3. Relate certain work to specific bid items or payment quantities.

00700.2 MAG SPECIFICATIONS (2019) PART 100 – GENERAL CONDITIONS

The order of precedence from Section 104.1 shall be deleted in its entirety and shall be per the contract.

00700.2.1 DEFINITIONS

In addition to the definitions already listed in MAG, the following terms shall have meanings indicated which shall be applicable to both the singular and plural thereof:

ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, Drawings, and specifications, by additions, deletions, clarifications, or corrections.

BID - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

BONDS - Bid, Performance, and Payment Bonds and other instruments of security, furnished by the Contractor and its surety in accordance with the Contract Documents.

CONTRACT PRICE - The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

CONTRACT TIME - The number of calendar days stated in the Contract Documents for the completion of the Work.

DRAWINGS - The part of the Contract Documents which show the characteristics and scope of the Work to be performed and which have been prepared or approved by the Engineer.

PROJECT – Synonymous with The Work, i.e., the total construction to be provided under the Contract Documents which may be the whole or a part as indicated elsewhere in the Contract Documents.

RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the Owner who is assigned to the Project site or any part thereof.

SAMPLES - Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

SUPPLIER - Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

00700.3 CONSTRUCTION REQUIREMENTS

00700.3.1 MATERIAL PROCUREMENT

Due to the visibility and level of activity in the project area, it is the intention of the City to limit the onsite construction timeline of the project. In order to accomplish this, the contractor is required to have 95% of all equipment procured before construction begins. This means that submittals must be approved, and equipment stored and in the physical possession of the contractor. Materials must be dedicated to the job and not shared with other projects. Contractor to provide proof that 95% of equipment and materials is in their possession before construction begins.

00700.3.2 DELIVERY SCHEDULING

The contractor is responsible for efficiently planning deliveries/pickups of equipment and materials to prevent multiple trucks from being onsite at a time and to limit idle time. The contractor shall schedule accordingly to ensure proper spacing between trucks.

00700.3.3 CONSTRUCTION HOURS

Construction shall be per the General Conditions.

00700.3.4 EXISTING SEWER LINE OPERATION

The contractor shall stage the construction in a way to minimize the use of bypass pumping. All existing sewer lines shall be protected and kept in operation for as long as possible. The contractor shall notify and get approval of the City before they shut down the sewer line.

00700.4 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

The Contractor shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all land monuments and property marks until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials and said responsibility will not be released until the project shall have been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, he shall restore, at no cost to the Contracting Agency, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner. Such damage will include but not be limited to landscaped areas. The contractor shall regrade the disturbed area as directed and restore the surface material to match existing in type and quality.

The Contractor shall restore all disturbed areas to a condition equal to or better than the existing improvements. Such restoration will include but not be limited to asphalt, walkways, fences, lights, sprinklers, landscaping, etc. In the case of landscaping, the Contractor may remove and store sod and plant material. If, in the determination of the Engineer, the sod and/or plant material did not survive the transplanting in good condition, the Contractor shall replace the sod and/or plant material to match in type and quality. Also, the Contractor may salvage any sprinkler system materials, lighting materials, etc. In the event that it is not feasible to reinstall the salvaged material, new material shall be installed.

The Contractor shall not dump spoil or waste material on private property without first obtaining from the owner written permission for such dumping. All such dumping shall be in strict conformance with the Grading and Drainage Ordinance of the Contracting Agency.

Access to private property shall be maintained to keep inconvenience to the property owner to a minimum. Prior to any construction in front of driveways the Contractor shall notify the property owner 24 hours in advance. Inconvenience caused by construction across driveways and sidewalks shall be kept to a minimum by restoring the serviceability as soon as possible. If it is necessary to leave open excavation for a long period of time, the Contractor shall provide structurally adequate steel plates to bridge the excavation.

00700.5 PUBLIC INFORMATION AND NOTIFICATION

00700.5.1 DESCRIPTION

The Contractor shall implement a community relations program for this project, including, but not be limited to:

1. Documenting existing property conditions prior to starting construction.
2. Assisting with information for printing and mailing of public notices.
3. Preparing, erecting and maintaining information signs.
4. Assist the City with information for telephone "Hot Line" 24-hour service.
5. Providing the Construction Manager information to be distributed.
6. Personal contact with residents and businesses prior to street or parking lot closures.
7. Attending special meetings as required by the Construction Manager.
8. Participate in a pre-construction public meeting held by the City.

The Contractor shall use these or other means to inform the local citizens, residents, and City officials of necessary operations which create high noise levels, street closures, detour locations, haul route and material delivery routes, hours of construction, disruption of school bus routes, mail delivery or emergency vehicle access or disruption of utility services.

Disruption to utility services shall be avoided. Safety is the principal concern at all times. Anticipated utility disruption shall be kept to a minimum and proper 2-day advanced notification provided.

Fourteen (14) days or more prior to the start of construction, the Contractor shall furnish and install two professionally prepared information signs to give drivers the option of taking alternate routes around the construction area. The Contractor shall obtain City of Sedona permits necessary to install the signs. Contractor shall coordinate and obtain approval of the sign locations and messages from the Construction Manager before they are installed. The information signs shall be four feet high by six feet wide (24 square feet) with white non-reflective lettering on a blue non-reflective background. Contractor shall maintain the information signs in good condition throughout the duration of construction and remove them at the end of the project, at which time the signs shall become City of Sedona's property. The Construction Manager will provide the Contractor the City address of where the signs are to be delivered.

Lettering shall be manufactured according to the Federal Manual on Uniform Traffic Control Devices (MUTCD) using Type "C" letters. Sign shall list the following information:

Project Name
Project Dates (Scheduled beginning and ending dates)
Construction Contractor Name

Contact for project
Website and/or Contractor hotline number for project

Contractor shall submit a layout drawing to the Construction Manager for approval showing the location, size and color of lettering and logos.

Sign supports shall be 4-inch by 4-inch pressure treated posts, set a minimum of 2-feet in the ground. The bottom of the sign shall be a minimum of 4-feet above the ground.

00700.5.2 EXISTING SITE CONDITIONS

Prior to starting construction, the Contractor shall document existing street and property conditions. Acceptable documentation shall be a video-recorded tape, supplemented with digital photographs. The videotape shall not be made from a moving vehicle. One (1) copy of the documentation package shall be given to the Construction Manager at least 5 working days prior to the Contractor commencing work. Documentation of existing conditions shall extend a minimum of 200' past the construction limits of all roadways.

00700.6 PERMITTING

It is the duty of the Contractor to determine that all necessary permits have been obtained. The Contractor shall, at the Contractor's own expense, obtain all the required permits which have not been furnished. The Contractor shall comply with all permit requirements until the Contract is completed or the permit is closed-out or transferred. The Contractor shall be responsible to close out all permits except those authorized by special provision to be transferred. The Contractor or the person supervising the authorized work shall notify the appropriate permit agency so as to insure proper inspection by the agency concerned.

END OF SECTION

01019.1 DESCRIPTION

Measurement and payment for all pay items in the proposal shall conform to section 109 of the MAG Uniform Standard Specifications for Public Works Construction (MAG Specifications) latest edition, City of Sedona (Sedona) General Conditions and standards as specified in these Technical Specifications. In the event of a conflict between these Technical Special Provisions and the requirements of the plans, detail drawings, or the MAG Specifications, these Technical Special Provisions shall prevail. In the event of a conflict between the Technical Special Provisions and Sedona's General Conditions, the General Conditions shall prevail.

Payment of the contract items shall be compensation in full for furnishing all overhead, labor, material, tools, equipment, and appurtenances necessary to complete the work in a good, neat, and satisfactory manner as indicated on the plans, or as specified, with all necessary connections and appurtenances for the satisfactory use of and/or operation of said item. No additional payment will be made for work related to each item unless specifically noted or specified. Measurement will be in place for the completed work with no allowance for waste.

01019.2 BID FORM DESCRIPTION

Bid form description shall be per the General Conditions.

01019.3 BID ITEMS

The measurement and payments for Section 01019.3 shall govern in the case of a conflict with measurement and payment of any subsequent sections.

Anything shown on the plans, but not specifically detailed in a bid item, is considered to be included in the cost of the project and these costs shall be spread out across other items.

01019.3.1 ITEM NO. 1 - MOBILIZATION

Mobilization shall be per Specification Section 02000 and General Conditions and include all aspects of the section including visual records.

Measurement and payment shall be per the General Conditions Section 33 and Section 901 of ADOT Standard Specifications for Road and Bridge Construction (most current edition). Payment will be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

01019.3.2 ITEM NO. 2 - DEMOBILIZATION

Demobilization shall be per the General Conditions and Specification Section 02000 and include all aspects of demobilizing, disposal of debris, and cleanup of the site to bring the site back to the preconstruction condition or better.

Measurement and payment shall be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

01019.3.3 ITEM NO. 3 - SWPPP

The Contractor is responsible for providing, submitting, and implementing the Stormwater Pollution Prevention Plan (SWPPP). The Notice of Intent (NOI) form provided by the City will be filled out and submitted to the City. However, the contractor must ensure compliance with AZPDES requirements, and all other applicable federal, state and local laws, ordinances, statutes, rules and regulations pertaining to the stormwater discharge and air, ground water and surface water quality. It must be prepared with the same level of detail and documentation as required by ADEQ and EPA and include all documents required by regulations. This bid item shall include all items required to submit, obtain, and implement the SWPPP.

Measurement and payment shall be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

01019.3.4 ITEM NO. 4 - SITE DEMOLITION

All site demolition shall be per Specification Section 02500, 02520 and 02900 and shall include, but is not limited to, all materials, equipment and labor for the removal of existing sewer line, piping on the plans.

Measurement and payment shall be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

01019.3.5 ITEM NO. 5 - SITE WORK

Site work shall be per MAG Section 201, 505, 725 and Specification Section 02020, 02510, and 02520. Work shall include all subsurface investigation, clearing and grubbing, material and sampling testing, concrete cutting, and concrete work.

Measurement and payment shall be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

01019.3.6 ITEM NO. 6 – CONSTRUCTION MOPO

The construction MOPO shall be per Specification Section 02553, 02930, the Bypass Pumping Report and all applicable regulations. This work includes keeping the existing sewer line online for as long as feasibly possible, switching between the existing sewer line and the temporary bypass pumping system, the temporary bypass pumping system and all requirements associated with it, and then switching between the temporary

bypass pumping system and the new sewer line. The bid item shall include all plans, equipment, piping, fencing and sound dampening devices required. This bid item shall also include the required manpower to oversee the MOPO as called for in the Contract Documents and Specifications.

Measurement and payment shall be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

01019.3.7 ITEM NO. 7 – GRAVITY SEWER LINE

The gravity sewer line shall be per MAG Section 615, 745 and Specification Section 15100. Work shall include all the material, trenching, backfilling, compaction, connecting to the existing gravity sewer line. Pipe fittings and miscellaneous appurtenances shall be considered incidental to the sewer line connection. Any procedures required to tie into the existing sewer line, and all testing required, shall be included in this bid item.

Measurement and payment shall be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

01019.3.8 ITEM NO. 9 - LANDSCAPING

The landscaping shall be per Specification Section 02900. All planting and installation shall be included.

Measurement and payment shall be made at the contract lump sum price and shall be full compensation for the item complete in place as indicated in the Contract Documents and Specifications.

END OF SECTION

01030.1 DESCRIPTION

This section covers project meetings including the pre-construction meeting and other progress and/or work coordination meetings conducted to provide communication and awareness to all parties associated with the Contract.

01030.2 PRE-CONSTRUCTION CONFERENCE

Prior to the commencement of work at the site, a pre-construction conference will be held at a mutually agreed time and place to be arranged by the Owner. The Owner shall also provide notification to all parties expected to attend the meeting. Attendees will include the following:

- Engineer
- Project Inspector
- Owner/Owner's Representative
- Contractor/Contractor's Representative/ Subcontractors as appropriate
- Governmental Representatives as appropriate (State, County, Municipal, etc.)
- Manufacturer/Supplier Representatives/Adjoining Contractors, as appropriate.
- Utility Service Representatives as appropriate.

Additional requirements are located in the General Conditions. If there is a conflict, the General Conditions shall supersede this section.

01030.2.1 Unless previously submitted to the Engineer, the Contractor shall bring to the conference one copy each of the following:

- Contract construction schedule in accordance with the General Conditions.
- Procurement schedule of major equipment and materials and items requiring long lead-time.
- Shop Drawings, samples or substitution proposals for items proposed as substitutions or "or equal" items.
- Schedule of work that includes the anticipated monthly payment amounts during the contract.
- A Schedule of Values of work to be paid for as lump sum items where partial payment is anticipated.

Additional requirements are located in the General Conditions. If there is a conflict the General Conditions shall supersede this section.

01030.2.2 The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda may include but not be limited to the following items:

- Contractor's Work Schedule.
- Transmittal, review, distribution and approval of Contractor's submittals.
- Processing of applications for payment.
- Maintaining records and documents.
- Field decisions and Change Orders.
- Use of project site, office and storage areas, security, housekeeping, and Owner's needs.
- Major equipment deliveries and priorities.
- Interpretation of Drawings and Specifications.
- Contractor's responsibilities for safety, first-aid and sanitation.

Additional requirements are located in the General Conditions. If there is a conflict the General Conditions shall supersede this section.

01030.2.3 The Engineer will preside at the pre-construction conference and will arrange for keeping minutes and distributing them to all attendees to the meeting.

01030.3 PROGRESS/COORDINATION MEETINGS

01030.3.1 The Contractor shall conduct regular on-site progress and coordination meetings at least weekly and at other times as requested by Engineer or as required by progress of the work. The Contractor, Engineer, and all Subcontractors active on the site shall be represented at each meeting. The Contractor may, at its discretion, request attendance by representatives of its suppliers, manufacturers, and other Subcontractors. The Contractor shall be responsible for providing written notification to those deemed necessary for attendance at least 36 hours prior to the time set for the meeting.

01030.3.2 The Contractor shall preside at the meetings and maintain a file of minutes of the proceedings. The purpose of the meetings will be to review the progress of the work, maintain coordination of effort, discuss changes in scheduling, and resolve other problems which may develop.

01030.3.3 Additional requirements are located in the General Conditions. If there is a conflict the General Conditions shall supersede this section.

END OF SECTION

01090.1 DESCRIPTION

Wherever in these Specifications references are made to the standards, specifications, or other published data of the various national, regional, or local organizations, such organizations may be referred to by their acronyms or abbreviations only. As a guide to the user of these Specifications, the following acronyms or abbreviations, which may appear herein, shall have the meanings indicated below. Additional abbreviation and reference standards are listed in the General Conditions. If there is a conflict the General Conditions shall supersede this section.

01090.1.1 DEFINITIONS OF ABBREVIATIONS AND ACRONYMS

AAR	Association of American Railroads
AASHTO	American Association of the State Highway and Transportation Officials
ACI	American Concrete Institute
ADC	Air Diffusion Council
AGA	American Gas Association
AGC	Associated General Contractors
AGMA	American Gear Manufacturers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute, Inc.
APWA	American Public Works Association
ARI	Air Conditioning and Refrigeration Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASQC	American Society of Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
BLM	Bureau of Land Management (U.S. Department of Interior)
CDA	Copper Development Association
CEMA	Conveyor Equipment Manufacturer's Association
CGA	Compressed Gas Association
CFR	Code of Federal Regulations
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturer's Institute
CMA	Concrete Masonry Association
CS	Commercial Standard of NBS (U.S. Dept. of Commerce)
CTI	Cooling Tower Institute

DIP	Ductile Iron Pipe
EIA	Electronic Industries Association
EPA	U. S. Environmental Protection Agency
ETL	Electrical Test Laboratories
FEMA	Federal Emergency Management Administration
FERC	Federal Energy Regulatory Commission
FS	Forest Service (U.S. Department of Agriculture)
FWS	Fish and Wildlife Service
GI	Galvanized Iron
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
ID	Inside Diameter
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IMC	International Mechanical Code
IME	Institute of Makers of Explosives
IPC	International Plumbing Code
ISA	Instrument Society of America
ISO	International Organization for Standardization
MBMA	Metal Building Manufacturer's Association
MOPO	Maintenance of Plant Operation
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEBB	National Environmental Balancing Bureau
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFGC	National Fuel Gas Code
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NRCS	Natural Resources Conservation Service (U.S. Department of Agriculture) (formerly SCS)
NSF	National Sanitation Foundation
OD	Outside Diameter
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PDI	Plumbing and Drainage Institute
PE	Polyethylene
PVC	Polyvinyl Chloride
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SSPC	Society for Protective Coatings
SSPWC	Standard Specification for Public Works Construction
UBC	Uniform Building Code
UL	Underwriters Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
UPRR	Union Pacific Railroad

USDARD	Rural Development (U.S. Department of Agriculture) (formerly Farmers Home Administration)
WCRSI	Western Concrete Reinforcing Steel Institute
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association
WWRP	Wastewater Reclamation Plant

01090.2 REFERENCED WORKS, CODES AND STANDARDS

Whenever references to specifications, codes, standards and other publications are made to these Specifications, the following rules shall apply:

01090.2.1 TITLES OF SECTIONS AND PARAGRAPHS

Titles of sections and/or paragraphs shown in these Specifications are for convenience of reference only, and do not form a part of the Specification.

01090.2.2 APPLICABLE PUBLICATIONS

Whenever references in these specifications are made to published specifications, codes, standards, or other requirements, it shall be understood that unless a date is specified, only the latest edition of these specifications, codes, and/or standards which have been published as of the date that the work is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.

01090.2.3 SPECIALISTS AND SPECIAL ASSIGNMENTS

In certain instances, specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such direction shall be recognized as special requirements and is not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" and qualified for the assignment of the work. Nevertheless, the final responsibility for fulfilling this assignment remains with the Contractor.

01090.2.4 BUILDING CODES

Reference herein to "Building Code" shall mean the Uniform Building Code issued by the International Conference of Building Officials (ICBO). The latest edition of the code as approved and used by the local agency as of the date of award, as adopted by the agency having jurisdiction, shall apply to the work herein, including all addenda, modifications, amendments, or other lawful changes thereto.

01090.2.5 OSHA

01090.2.5.1 OSHA REGULATIONS - References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

01090.2.5.2 OSHA STANDARDS - References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards of the U.S. Code of Federal Regulations, including all changes and amendments thereto.

01090.2.6 DOT STANDARDS/SPECIFICATIONS

References to "State DOT Specifications" or "State DOT Requirements" shall mean the Specifications for Excavation on State Highway Right-of-Way and/or Standard Specifications for Road and Bridge Construction, including all amendments thereto, issued by the State agency responsible for highways wherein the Contract is located, and any other written requirements or provisions issued by that agency which are contained in these Contract Documents.

01090.2.7 FEDERAL PIPELINE SAFETY STANDARDS

Reference to "Federal Pipeline Safety Standards" shall mean Title 29, Parts 191 and 192, Federal Pipeline Safety Minimum Standards, U.S. Code of Federal Regulations including all changes and amendments thereto.

01090.2.8 STATE GAS PIPELINE SAFETY STANDARDS

References to "State Gas Pipeline Safety Standards" shall mean the appropriate section/s of the legal code or regulations adopted in the State wherein the work is located, including all changes and amendments thereto.

01090.3 STANDARDS IMPOSED BY OTHER AGENCIES OR ORGANIZATIONS

01090.3.1 PROPERTY BELONGING TO OTHER AGENCIES OR ORGANIZATIONS

Construction may occur on property owned or administered by agencies or organizations other than the Owner, such as federal and/or state departments of transportation, the U. S. Forest Service, the U. S. Bureau of Land Management, the U.S. Fish and Wildlife, counties, canal companies, irrigation companies, utility companies, other federal and state agencies, municipal governments, etc. Work which is to take place on such property may be required to be in accordance with special construction requirements of that agency or organization as well as these specifications.

01090.3.2 ADDITIONAL INFORMATION AND SPECIFICATIONS

Information will be provided on the plans to indicate areas of the Work which fall on property owned or administered by agencies and organizations other than the Owner. Specifications from agencies which are affected by the work will be provided in the Appendix to the Contract Documents. Those specifications provided in the Appendix shall be considered part of the Contract Documents and the Contractor shall include sufficient compensation in its bid to cover the work required for compliance thereto.

01090.4 CONFLICTS

In case of conflict between codes, reference standards, Drawings and the other Contract Document, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the Engineer for clarification and directions prior to bidding (pre bid) or ordering and providing any materials or labor required therefrom (post bid). The Contractor shall assume the most stringent requirements apply when preparing bids for this Contract.

01300.1 DESCRIPTION

The Contractor shall submit to the Engineer, for review, a proposed schedule of shop drawings, materials information, samples, operations and maintenance manuals, equipment information, procedures, and construction photography records. The submittals of shop drawings and product data shall conform to the General Conditions, this specification, and section 105.2 of the MAG Specifications with the following exceptions.

Paper copies of submittals for approval are not required. Contractor to submit information in PDF form. Response to submittal will also be provided by PDF. This does not apply to final O&M manuals. Final O&M manuals shall be submitted according to Section 01300.3 of these Specifications.

Submittals will be stamped with either “Approved”, “Approved as Noted” or “Not Approved”.

01300.2. SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

In addition to MAG 105.2 the following conditions apply to shop drawings and material submittals. Any conflict between MAG and these specifications shall be brought to the attention of the Engineer for final decision.

01300.2.1 ADDITIONAL REQUIREMENTS

1. Shop Drawings, Product Data, Samples and similar submittals are not part of the Contract. The purpose of their submittal is to demonstrate, for those portions of the Work for which submittals are required by the Contract Documents, the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.
2. The Contractor shall review for compliance with the Contract Documents, approve and submit to the Engineer/Consultant Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor will be returned by the Engineer/Consultant without action. Contractor shall submit to Engineer/Consultant for review and approval or for other appropriate action, electronic copies and/or five (5) hard copies, if requested by the Engineer, of all Shop Drawings, Product Data, Samples or similar submittals bearing a stamp or specific written indication that Contractor has satisfied the Contractor’s responsibilities under the Contract Documents with respect to his review of his submission.
 - a. By approving and submitting Shop Drawings, Product Data, Samples and similar Submittals, the Contractor represents that the Contractor has determined and verified materials, quantities, specified performance criteria,

- installation requirements, catalog numbers, field measurements and filed construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- b. Contractor shall give Engineer specific written notice of each variation that the Shop Drawings, Product Data, Samples and similar submittals may have from the requirements of the Contract Documents, and, in addition, shall cause a specific Contractor notation to be made on each Shop Drawing, Product Data, Sample and similar submittals submitted to Consultant for review, approval, or other appropriate action highlighting each such variation.
 - c. The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Engineer. The Engineer will review and return such submittals within ten (10) working days or within a reasonable period so as to not delay the project.
 - d. Engineer's review, approval, or other appropriate action regarding Contractor's submissions will be only to check conformity with the design concept of the Project and for compliance with the information contained in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate component item will not indicate approval of the assembly into which the item is functionally integrated. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings, Product Data, Samples or similar submittals to the Contractor. Contractor may be required to resubmit as required revised Shop Drawings, Product Data, Samples or similar submittals for further review and approval. Contractor shall direct specific attention in writing to any new revisions not specified by Contractor on previous Contractor submissions.
3. The Work shall be in accordance with approved submittals, except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Engineer's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Engineer in writing of such deviation at the time of submittal and (1) the Engineer has given written approval regarding the specific deviation as a minor change in the Work, or (2) a Change Order or Field Work Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Engineer's approval thereof.
 4. Where Engineer requires by written request an approved Contractor Shop Drawing, Product Data, Sample, or similar submittals any related Work performed by Contractor prior to Consultant's review and approval of the affected submission will be at the sole risk of Contractor.

5. The Contractor shall not be required to provide professional services which constitute the practice of architecture or Engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Professional's must be licensed in the state of Arizona. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Engineer. Any changes to the professional's work must be approved, in writing, by the professional. The Owner and the Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals. The Engineer will review, approve or take other appropriate action on submittals only for the limited purpose of checking of conformance with information given and the design concept expressed in the Contract Documents.

01300.2.2 ENGINEER APPROVAL - When the submittals are reviewed by the Engineer, A pdf copy will be returned to the Contractor marked "Approved", "Not Approved", "Approved as Noted", or similar notification. If changes or corrections are necessary, a pdf will be returned to the Contractor with such changes or corrections indicated by a brief statement, and the Contractor shall correct and resubmit the drawings, as a pdf, to the Engineer.

Fabrication work shall not commence until the Engineer has reviewed the pertinent shop drawing/s and returned copies to the Contractor marked either "Approved" or "Approved as Noted". Corrections indicated on such submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis of claims for extra work.

Approval of shop drawings will not be required for reinforcing steel that is detailed by the Contractor in accordance with the Plans and Specifications. Any change from the Plans and Specifications made by the Contractor in any aspect of the Work shall be approved by the Owner and the Engineer in a written Change Order prior to any work being altered from that already approved for construction.

01300.2.3 SPECIFICATION VERIFICATION

Each submittal shall include a specification section which provides the relevant specification section, including relevant addendum updates.

- a) Indicate in the left margin, next to each pertinent paragraph, either compliance with a check (√) or deviation with a consecutive number (1, 2,3).

- b) Provide a list of all numbered deviations with a clear explanation and reason for the deviation.

001300.2.4 MATERIALS INFORMATION SUBMITTALS

In keeping with 01300.2.1 above, the Contractor shall assemble and submit each manufacturer's catalog cuts and materials information sheets pertaining to materials and equipment to be furnished and installed in the Work. Preliminary submittals shall be submitted as pdf for review. The Contractor shall submit two (2) original hard copies. Hard copies shall be enclosed in 3-ring binders. Failure to submit all materials information may result in the Contractor's partial payments to be withheld until submittals are complete. Photocopies of the catalog cuts and information sheets will not be acceptable as submittals without prior authorization from Engineer.

01300.2.5 CONTRACTOR LIABILITY

The Contractor shall assume all responsibility and risk for any re-work or other costs resulting from errors in Contractor submittals. The Contractor shall be responsible for showing accurate dimensions and details of connections required to ensure the function of the equipment and/or component of the Work being illustrated.

01300.3 OPERATIONS AND MAINTENANCE MANUALS

01300.4.1 STRUCTURE OF OPERATIONS AND MAINTENANCE MANUALS

The Contractor shall provide preliminary Operations and Maintenance (O&M) manuals in pdf format for review. The Contractor shall furnish two (2) identical sets of the Final O&M manuals. Each set shall consist of one or more volumes, each of which shall be bound in a standard size, 3-ring, loose-leaf, vinyl plastic, hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches. A table of contents shall be provided which indicates all equipment in the O&M manuals. Additionally, a bookmarked PDF copy of all O&M manuals must be provided to the owner. Final completion will not be issued until the bookmarked PDF copy of all the O&M manuals have been received and approved by the Engineer and the Owner.

01300.4.2 CONTENTS

The Contractor shall include in the Operations and Maintenance Manuals the following information for each item of mechanical, electrical, and instrumentation equipment:

- Care and maintenance of all finished exposed surfaces.
- Complete operating instructions, including location of controls, special tools or other equipment required, related instrumentation, and other equipment needed for operation.

- Preventive maintenance procedures and schedules.
- Complete parts lists, by generic title, identification number, and catalog number, complete, with exploded views of each assembly.
- Disassembly and reassembly instructions.
- Name, location, and contact info of nearest supplier and spare parts warehouse.
- Name, location, and contact info of manufacturer.
- Recommended start-up, testing and troubleshooting procedures.
- Prints of the record drawings, including diagrams and schematics, as required under the electrical and instrumentation portions of these specifications.

01300.4.3 SCHEDULE OF DELIVERY

Operations and Maintenance manuals shall be submitted in final form to the owner before seventy-five (75) percent of the Work is completed. Any discrepancies found by the owner and Engineer in the Operations and Maintenance manuals shall be corrected by the Contractor prior to final acceptance of the project.

01300.5 SCHEDULE OF VALUES

At the time of the pre-construction conference, the Contractor shall submit a Schedule of Values of the Work measured as lump sum bid items. On the Schedule, those items shall be subdivided into component parts in sufficient detail as to form a basis for determining progress payments during construction. Quantities, and/or prices, shown on the Schedule shall equal the total contract price for each lump sum item. Information provided on the Schedule will be reviewed and approved by the Engineer when found acceptable. That information will then be incorporated into the data used for preparing the Application for Payment by the Engineer.

01300.6 CONTRACT CONSTRUCTION SCHEDULE

A construction schedule, prepared in accordance with requirements of the General Conditions, shall be submitted to the Engineer at the pre-construction conference. Unless required otherwise in Special Provisions, such schedule shall show the anticipated time of completion, approximate start dates of identifiable segments of the Work, and anticipated value of the work expected to be completed in monthly time periods within the contract period.

01300.7 PROCUREMENT SCHEDULE

At the time of the pre-construction meeting (see Section 01030), the Contractor shall submit a procurement schedule to the Engineer. This plan shall include all equipment

and materials required for the Work included in the Contract that are not readily available and will require off-site manufacture and lead time which can affect the progress of the Work. The plan shall show at least the following information:

- Equipment/Material Name
- Anticipated amount of time for ordering, manufacturing, and shipping to Work site.
- Anticipated dates for ordering, receiving and installing.

01300.8**CONSTRUCTION PHOTOGRAPHY RECORDS**

When required in the Contract Documents and prior to commencement of any of the Work, the Contractor shall prepare colored CD photography records of all areas of the Contract work site and provide copies of such records to the Engineer. Such records shall become the property of the owner and may be used for determining the condition of work site/s and degree of restoration required for completion of the Work (see also Section 2000).

END OF SECTION

01510.1 DESCRIPTION

This section covers measures and instructions for prevention of damage to existing structures and utilities, whether above ground or underground, during execution of the Work of the Contract. The protection of existing improvements shall conform to section 107 of the MAG Specifications, the General Conditions and the following Sections.

01510.2 PROTECTION OF EXISTING UTILITIES**01510.2.1 INTEGRITY OF UTILITIES**

The Contractor shall be responsible for safeguarding and maintaining the integrity of all conflicting utilities. This responsibility includes securing the assistance of available utility location services in the area in which the Work is being performed. The Engineer has attempted to show the location of all utilities anticipated to conflict with the Work. However, when a conflicting utility line is discovered that was not shown on the plans, the Contractor shall contact the utility's owner and notify the Engineer immediately for resolution of the conflict. When realignment or relocation of the Work, or relocation of the conflicting utility is deemed necessary, the Engineer shall give direction in writing for the Contractor to proceed. Work resulting from such direction may be treated as a changed condition, and appropriate authorization and payment will be made in accordance with the General Conditions.

01510.2.2 LOCATING UTILITIES

It shall be the responsibility of the Contractor to locate and expose or identify all existing utilities, both underground and overhead, for the purpose of preventing damage to them. The Contractor shall notify all concerned utility offices at least 48 hours in advance of construction operations in which a utility agency's facilities may be involved. This shall include, but not be limited to, irrigation water, culinary water, telephone, gas, and electric.

01510.2.3 CHANGES TO UTILITIES

The Contractor shall be responsible for any and all changes to, or re-connections to, public utility facilities encountered or interrupted during execution of the Work, and all costs related thereto shall be borne by the Contractor. The Contractor shall negotiate with, and pay, the respective utility agency for work it must do in connection with moving, repairing, or restoring its utility(s). The Contractor shall further make all necessary notifications, scheduling, coordination, and management of details related to any such interference. The potential or projected cost of any public utility interference shall be included in the Contractor's price covering the major Contract Item to which the interference or changes are attributable.

01510.2.4 MAINTENANCE OF SERVICE

01510.2.4.1 CONTINUOUS SERVICE - Unless otherwise required in the Contract Documents, all utilities, both underground and overhead, shall be maintained in continuous service throughout the entire contract period. The Contractor shall be responsible and liable for any damages to or interruption of service caused by the construction.

01510.2.4.2 ACCIDENTAL INTERRUPTION OF SERVICE - In the event of interruption of other utility services as a result of accidental breakage, the Contractor shall promptly notify the appropriate responsible authority. The Contractor shall then cooperate with that authority in restoration of service as soon as possible and shall bear all cost of repair. In no case shall interruption of any water or other utility service be allowed outside working hours unless the Engineer has issued prior authorization. When changeover of service connections to new utility lines becomes necessary, interruptions of individual services for periods of up to 8 hours will be allowed providing 24-hour advance notice has been given to affected users.

01510.2.4.3 TEMPORARY INTERRUPTION AND RELOCATION - If the Contractor desires to temporarily or permanently relocate or shut down any utility or appurtenance, the Contractor shall make the necessary arrangements and agreements with the owner or operator of the respective utility and shall be completely responsible for all costs concerned with the relocation or shutdown and reconstruction. Shutdown and relocation and/or reconstruction shall be subject to inspection and approval by the Engineer and the owner of the utility.

01510.3 PROTECTION OF PROPERTY AND EXISTING STRUCTURES

01510.3.1 REMOVAL OR RELOCATION OF PROPERTY - All property removed or relocated by the Work shall be reconstructed in its original or new location as soon as possible. Restoration of existing property or facilities shall be to a condition as good or better than its original condition.

01510.3.2 DAMAGE TO PROPERTY - All property damaged by the Contractor, whether inside or outside the limits of easements provided by the Owner, shall be the responsibility of the Contractor. All such damages shall be repaired with like material and restored to its original condition, or better. Such repair or restoration shall be accomplished at the Contractor's expense without additional compensation from the Owner.

01510.4 PROTECTION OF PAVED SURFACES

To avoid unnecessary damage to paved surfaces, tracked equipment shall use rubber cleats or paving pads when operating on or crossing all existing paved surfaces unless authorized otherwise in writing by the Engineer.

01510.5 RIGHTS-OF-WAY AND EASEMENTS

01510.5.1 MINIMAL DISTURBANCE OF RIGHTS-OF-WAY - When construction

easements have been obtained by the Owner, the Contractor shall take appropriate measures to minimize disturbances to surface improvements within the easements. The Contractor shall obtain a signed release from each property owner, approving restoration work in the construction easements across its respective property/s.

01510.5.2 CONSTRUCTION AREAS - The Contractor shall confine construction operations to the area within the dedicated rights-of-way for public thoroughfares, or within areas for which construction easements have been obtained, unless the Contractor has made separate special agreements with the affected property owners in advance.

01510.5.3 PROPERTY OWNER NOTIFICATION - The Contractor shall give at least 48 hours advance notification of commencement of construction to property owners having land on which construction will take place. During all construction operations, the Contractor shall construct and maintain such facilities as may be required to provide access by all property owners to their property. No one shall be cut off from access to their property for a period exceeding eight (8) hours unless the Contractor has made special arrangements with the affected persons. The Contractor shall grade all disturbed surfaces required for motor vehicle traffic at least daily unless directed otherwise in the Contract Documents or in writing by the Engineer.

END OF SECTION

01520.1 DESCRIPTION

This Section includes requirements that shall be followed by the Contractor, to protect the environment, while performing work under this contract. The Contractor shall also comply with any applicable additional requirements made by federal, state, or local government agencies.

01520.1.1 RELATED WORK AND REFERENCED SECTIONS

Most current version of MAG Standard Specifications.

01520.1.2 SUBMITTALS

Section 01300 – Submittals.

01520.1.3 DEFINITIONS

Not used.

01520.2 MATERIALS

Not used.

01520.3 CONSTRUCTION REQUIREMENTS**01520.3.1 EXPLOSIVES AND BLASTING**

The use of explosives on the work will not be permitted unless approved otherwise in the Contract Documents or in writing by the Engineer.

01520.3.2 DUST ABATEMENT

01520.3.2.1 CONTROL MEASURES - The Contractor shall furnish all labor, equipment, water and means required to provide effective dust control and abatement measures. Control measures shall be applied as often as necessary and wherever directed in writing by the Engineer, to prevent construction operations from producing dust in amounts that may be damaging to property, vegetation, or animals, or detrimental to persons within reasonable proximity of the work site. Dust Control shall conform to section 104.1.4 of the MAG specifications.

01520.3.2.2 HAUL ROUTES AND WORK SITES - The Contractor shall identify haul routes or material handling areas, outside of the Work site, whereon dust may be generated, and shall exercise appropriate measures to abate any dust problem caused by its operation. Such dust abatement measures shall be taken immediately when observed or when required in writing by the Engineer.

01520.3.3 STORM AND GROUND WATER

01520.3.3.1 PERMITS REQUIRED – A storm water NPDES permit may be required. The Contractor is responsible to obtain such permit and comply with the conditions thereof. This includes preparation of a SWPPP (Storm Water Pollution Prevention Plan) and filing a NOI (Notice of Intent) with ADEQ (Arizona Department of Environmental Quality).

01520.3.3.2 CONTROL MEASURES - The Contractor shall provide and maintain, at all times during construction, ample means and devices to promptly remove all water entering the Work, whether the water is surface or ground water. Water removed by the Contractor shall be directed into ponds or areas separated from live streams or drainage ways, to keep sediment from entering live water.

01520.3.3.3 DRAINAGE PATTERNS - In excavation, fill, and grading operations, the Contractor shall take care, to disturb the existing drainage pattern as little as possible. Particular care shall be taken not to direct drainage water onto private property or into streets or drainage ways inadequate for the increased flow.

01520.3.3.4 FORDING OF WATERWAYS - Fording of live streams or anybody of live water to accomplish the Work shall not be permitted. Mechanized equipment also shall not be operated in live water to accomplish the Work unless authorized in writing by the Engineer, or in the Contract Documents.

01520.3.3.5 FILLING OF WATERWAYS - The Engineer will not approve the filling of any ditches, washes, drainage ways, streams, wetlands, or other surface waters by the Contractor to accomplish the Work unless specific instructions are included in the Contract Documents which will provide for how the affected drainages or surface waters are to be treated.

01520.3.4 NOISE ABATEMENT

In or near inhabited areas, particularly residential areas, the Contractor's operations shall be performed in a manner to prevent noise from becoming a nuisance or problem. Particular consideration shall be given to noise generated by repair and service activities during the night hours. Noise abatement shall conform to section 107.6.2 of the MAG specifications.

01520.3.5 CHEMICALS

All chemicals and/or petroleum-based products used during project construction or furnished for project shall be handled, applied and disposed of in strict accordance with the printed instructions of the manufacturer and shall conform to section 106 of the MAG specifications.

01520.3.6 WASTE AND SURPLUS MATERIALS DISPOSAL

01520.3.6.1 CLEAN WORK SITE - The Contractor shall keep the work site, haul roads and other areas of use in a neat, clean condition, free from any accumulation of surplus materials. It shall be the responsibility of the Contractor, at its own expense, to remove and legally dispose of all surplus materials resulting from all Work activities performed in accordance with the Contract Documents.

01520.3.6.2 SURPLUS MATERIAL - Surplus material includes, but is not limited to, salvaged materials and equipment that otherwise would have been abandoned in place, rocks too large to be used as backfill, wood and other organic or unsuitable materials, trash, rubbish, and waste products of any nature, and any other debris generated by the Work.

01520.3.6.3 REGULATORY COMPLIANCE - Disposal of surplus materials shall be accomplished in accordance with all local codes, laws, ordinances, and all applicable safety laws (particularly to the requirements of Part 1926 of the OSHA Safety and Health Standards for Construction) in effect at the approved disposal site. In no case shall it be acceptable for any surplus material to be disposed of in streams, marshes or wetlands.

01520.3.6.4 APPROVAL OF DISPOSAL - The Engineer will not approve any disposal operation, which creates an unsightly and/or unsanitary nuisance. The Contractor shall maintain disposal sites in a reasonable condition of appearance during construction. When designated and/or public disposal sites are unavailable, written approval must be obtained from the Engineer to dispose of any surplus materials on any other site. All disposal sites are subject to approval by the Engineer. The Contractor shall secure permission and all permits required for use of any dumpsite not previously arranged and designated by the Owner. The Contractor shall retain copies, and provide copies upon request, of all disposal permits and/or agreements obtained for the Contract Work.

01520.3.6.5 SCHEDULED REMOVAL - The Contractor shall establish regular intervals of collection and disposal of surplus materials during construction. Stockpiling of surplus materials for later disposal will not be approved or allowed.

01520.3.7 OPEN BURNING

Open burning of materials may be allowed only, when approved by the Engineer, in strict accordance with all regulations in effect for the area at which the burning would be performed, and the Contractor shall obtain any necessary permits from the appropriate governing entity prior to the start of burning. The Contractor shall not allow fire to spread beyond the material intended for burning. No accumulation of residue from burning shall remain on or adjacent to the construction site, without written approval of the Engineer.

01520.3.8 SANITATION

01520.3.8.1 TOILETS - The Contractor shall provide fixed or portable chemical toilets for employee use in conformance with the requirements of Part 1926 of the OSHA Standards for Construction and when public toilets are not available or within fifteen (15) minutes walking distance of the Work site.

01520.3.8.2 COLLECTION OF WASTES - The Contractor shall be responsible for daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor shall be disposed of away from the site in accordance with all laws and regulations pertaining thereto.

01520.3.9 HAZARDOUS MATERIAL

01520.3.9.1 REGULATORY COMPLIANCE - Disposition of any hazardous material or toxic or hazardous waste shall be made in accordance with the requirements and regulations administered by the State agency wherein the Work site is located.

01520.3.9.2 ABNORMAL CONDITIONS - Abnormal conditions include, but are not limited to, the following: buried barrels with liquid or solid contents; buried or above ground tanks with liquid contents; obnoxious odors; excessively hot earth; stained and discolored soils; smoke; unidentifiable powders, sludge, pellets; or any other similar condition.

01520.3.9.3 DISCOVERY AND NOTIFICATION - If any abnormal conditions are encountered during construction, which indicate the presence of a hazardous material, toxic, or hazardous waste, the Contractor shall immediately suspend work in the area of the discovery and notify the Engineer and treat the situation with extreme caution. The Contractor's operation in the area of discovery shall not resume until so directed by the Engineer; however, the Contractor shall continue working in other areas of the project, unless otherwise directed by the Engineer.

01520.3.9.4 DISPOSAL - When it becomes necessary for the Contractor to dispose of discovered materials, the work may be considered a change and administered in accordance with the General Conditions. Should the disposition of discovered waste material require special procedures or handling by certified personnel, the Contractor will make all such arrangements. When it becomes necessary to obtain permits for transporting or handling discovered material, the Owner will obtain the permits.

01520.3.9.5 SPILLS AND NOTIFICATION - In the event of spills of petroleum-based products or hazardous wastes by the Contractor, the Contractor shall immediately notify the Engineer. The Contractor shall also notify the appropriate State environmental enforcement agency, unless the spill consists of less than one (1) gallon of petroleum based products. In no case will notification be made later than 24 hours after the discovery of the spill. In addition, written notification shall also be made within 5 calendar days of the discovery.

01520.3.9.6 COST OF CLEANUP - All costs for cleanup and disposal of hazardous materials due to spills, inappropriate handling, or negligence of the Contractor shall be borne by the Contractor.

01520.3.10 ENVIRONMENTAL COMPLIANCE

01520.3.10.1 REGULATORY COMPLIANCE - The Contractor shall comply with the applicable requirements of the National Historic Preservation Act as it relates to the preservation of ALL environmental resources. Clearance for protection of environmental resources located within the designated Work site is the responsibility of the Owner and such clearance has been obtained for the Contract, unless provided for otherwise in the Contract Documents.

01520.3.10.2 DISCOVERY OF HISTORIC/ARCHEOLOGICAL OBJECTS – The Contractor shall observe the following:

- DISCOVERY AND NOTIFICATION - If a suspected or unsuspected historic, archeological, or paleontological item, feature, or site is encountered, construction operations shall be immediately stopped in the vicinity of the discovery and the Engineer shall be notified of the nature and exact location of the findings. The Contractor shall not damage the discovered objects and shall provide written confirmation of the discovery to the Engineer within two (2) calendar days.
- RESTRICTION OF CONSTRUCTION - Should operations in the vicinity of a discovery be restricted, the Engineer will keep the Contractor informed concerning the status of the restriction. The Contractor should be aware that the time necessary for the Owner to negotiate the handling of the discovered is variable and is dependent on the nature and condition of the circumstances. It is possible that a delay of as much as three weeks in the vicinity of the discovery can be expected. The Engineer will inform the Contractor when the restriction is terminated. Changes required to accommodate delay or Work resulting from the discovery will be authorized in accordance with the General Conditions.

01520.3.11 OPERATIONS OUTSIDE OF THE PROJECT SITE

In the event the Contractor chooses to use any site or means of obtaining resources beyond those provided as part of the Contract, the Contractor shall retain the services of a qualified, certified environmental consultant to produce a research design or plan for obtaining any and all necessary environmental clearances for such use. The Contractor shall provide the plan to the Engineer for review and approval, as required, following which the plan shall be implemented. The Contractor shall submit evidence of environmental clearances and compliance before commencing any activities within the extended use area. At a minimum, clearances will include those listed below. Additional clearances may be required as necessary.

01520.3.11.1 CULTURAL RESOURCES (Archeological and Historic) - Clearance may require consultation with the State Historic Preservation Office.

01520.3.11.2 THREATENED AND ENDANGERED SPECIES - Compliance may require written clearance from the U.S. Fish and Wildlife Service.

01529.3.11.3 FLOOD PLAINS – May require consultation with the Federal Emergency Management Agency (FEMA) or corresponding state agency.

01520.3.11.4 WETLANDS AND OTHER BODIES OF WATER – May require consultation with the Army Corps of Engineers and/or appropriate state agency.

The Contractor is cautioned that obtaining environmental clearances can be costly and time consuming.

01520.4 METHOD OF MEASUREMENT

No separate measurement shall be made for environmental controls. Measurement for this item is included as part of another bid item.

01520.5 BASIS OF PAYMENT

No payment shall be made for environmental control. The environmental control shall be considered incidental to the project.

END OF SECTION

01560.1 DESCRIPTION

All construction staking shall be supervised by a land surveyor registered in the state in which the Work is located. Surveys will be performed consistent with professional practices and precision generally conducted by surveyors licensed in that state. The construction staking shall conform to section 105.8 of the MAG Specifications with the following exceptions. Construction staking shall be the responsibility of the Contractor and not of the Engineer.

The first two paragraphs of Section 105.8 shall be deleted in their entirety and replaced with the following:

“The Contractor will provide a Registered Land Surveyor (RLS) who will set construction stakes establishing lines and grades for road work, structures and centerlines for utilities and necessary appurtenances as he may deem necessary. The Engineer will furnish the Contractor with all necessary information relating to the lines and grades.

The Contractor provided RLS will be responsible for resetting any survey monuments as required by the plans and/or contract documents.

There will be no separate payment for the construction staking. Construction staking will be considered incidental to the project and other related bid items.”

Additional requirements are located in the General Conditions. If there is a conflict the General Conditions shall supersede this section.

END OF SECTION

01580.1 DESCRIPTION

In general, the Contractor is responsible for providing and maintaining access to the Work, handling and storing of materials and equipment, safety and security within the Work site, and coordination and cooperation with the Owner, its representatives, governing authorities and other contractors working for the Owner in accordance with the provisions of the General Conditions. This section contains specific requirements which apply to these responsibilities. Additional requirements are located in the General Conditions. If there is a conflict between the General Conditions and this specification, the General Conditions dictate.

01580.1.1 RELATED WORK AND REFERENCED SECTIONS

Section 02005 – Traffic Control

01580.1.2 SUBMITTALS

Not used.

01580.1.3 DEFINITIONS

Not used.

01580.2 WORK SITE ACCESS**01580.2.1 INVESTIGATION OF WORK SITE AREA**

The Contractor shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting ingress and egress to the site of the work.

01580.2.2 HAUL ROADS

It shall be the Contractor's responsibility to construct and maintain any new haul roads required for its construction operations.

01580.2.3 USE OF PUBLIC STREETS AND ALLEYS

Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, alleyway, or parking area during the performance of the Work, unless shown otherwise in the Contract Documents.

01580.2.4 CLOSURE OF PUBLIC ROADWAYS

No street, road, or highway shall be closed to the public without first obtaining permission from the proper governmental authorities and the Engineer. Where excavation is being performed in streets or highways, one lane in each direction shall

be kept open to traffic at all times, unless otherwise authorized by the Contract Documents or the Engineer. Toe boards, or other measures, may be required by the Engineer to retain excavated material when deemed necessary.

01580.2.5 INTERFERENCE WITH UTILITIES

The Contractor shall so conduct operations as not to interfere unnecessarily with the infrastructure of utility companies or other agencies in such streets, alleyways, or parking areas.

01580.3 PUBLIC SAFETY AND ACCESS

Fire hydrants, approaches to fire stations, police stations and hospitals on or adjacent to the Work shall be kept accessible at all times. Appropriate measures shall be taken by the Contractor, to assure the use of sidewalks, and the proper functioning of all gutters, sewer inlets, water mains, drainage facilities and other infrastructure.

The Contractor's responsibility for Work safety or liability for Work site accidents is not lessened by the presence of the Engineer or his or another inspector performing monitoring of Work site safety conditions.

See also Section 02005 – Traffic Control.

01580.4 CONTRACTOR'S USE OF THE WORK SITE

The Contractor's use of the Work site shall be limited to its construction operations. Written approval by the Engineer will be required for any other use of the site, such as material and equipment storage, personnel vehicle parking, on-site fabrication facilities and field office.

01580.5 OFF-SITE STORAGE

The Contractor shall make arrangements for, bear any use costs associated with, and obtain written permission from the Engineer prior to using any off-site storage or shop areas or facilities determined necessary for execution of the Work. Storage facilities shall be equipped with fences and/or lockable entries that will prevent entry by unauthorized parties. Before off-site storage facilities are placed in use, the Contractor shall provide the Owner keys or combinations to locking devices used to secure the facility.

01580.6 COOPERATION WITH OTHER CONTRACTORS

Prior to authorizing other contractors to work on or adjacent to the Work site, the Owner shall notify the Contractor in writing and provide the name and address of the contractor, the name of its supervisor, a description of the work to be performed, and a schedule which shows the dates and planned segments of the work to be completed by the other contractor. In the event that conflicts, or interferences

occur between the Contractor and the other contractor's operation, the Engineer shall be notified immediately. The Engineer shall then take appropriate action needed to resolve the problem.

END OF SECTION

02000.1 DESCRIPTION

This section describes various tasks associated with project execution and close out. Mobilization shall include: preparatory work and materials necessary for obtaining clearances for the Work; moving personnel, equipment, supplies, storage facilities, traffic control plan, and incidentals to and from the Project Site; quality control; clean-up; temporary utilities and quarters; permits, bonds and insurance; dust abatement, storm water control, and noise abatement; waste and rubbish disposal and control; sanitation; and project close-out operations.

02000.1.1 RELATED WORK AND REFERENCED SECTIONS

Contract Closeout Section 107.2 of MAG Standard Specifications
Section 01510 - Protection of Existing Property
Section 01520 - Environmental Controls

Additional requirements are located in the General Conditions. If there is a conflict the General Conditions shall supersede this section.

02000.1.2 SUBMITTALS

02000.1.2.1 VISUAL RECORDS - The Contractor shall furnish at least one copy of all visual records, as described below in 02000.3.1, to the Owner.

02000.1.2.2 SERVICE CONNECTION LOCATION AND DOCUMENTATION – When service connections are included in the scope of work the Contractor shall deliver all signed tie-sheets (see 02000.3.2 below) to the Engineer not less than forty-eight hours prior to when the service connection is to be installed.

02000.1.3 DEFINITIONS

DVD Record - Photography on DVDs of areas potentially liable for disturbance as a result of the Work required by this Contract.

Service Connection Interview & Documentation - Interviews with potential system users and the documentation of location data for service connections to the respective property from utility lines being installed under this Contract.

Tie Sheets - Forms provided by the Engineer for use in documenting the location of service connection/s of system users.

Service Connection - Piping extending from the main utility line to the property line, or designated connecting point, of any user of the system.

02000.2 MATERIALS**02000.2.1 VISUAL RECORD**

Records shall be made on professional quality, standard DVD format recording. DVD's shall be provided with protective covers and shall be labeled to indicate the area covered by the photography. Visual record shall have date stamp in video.

02000.3 CONSTRUCTION REQUIREMENTS**02000.3.1 VISUAL RECORDS**

Prior to any disturbance of the area, the Contractor shall produce a DVD photography of all areas, including but not limited to right-of-ways, streets and roadways, haul-roads and access routes, storage areas, construction sites, and buildings or structures, which will be, or may be, affected by the Work. Such photography will be of a quality to allow accurate determination of location, size, and condition of existing features and improvements taken prior to any occupancy or execution of Work by the Contractor. Additionally, video for each street shall be separated into different chapters, which should each be accessible from the startup menu. Video footage shall have a date stamp to demonstrate time of recording. Coverage should be taken while the camera is stationary, not from a moving vehicle or other means. DVD's are subject to approval by the engineer and owner. Construction may not begin until the engineer has approved the visual record.

02000.3.2 SERVICE CONNECTION LOCATION AND DOCUMENTATION

Unless called for differently, the Contractor shall contact and interview the owners of all properties indicated on the Drawings and obtain from them sufficient information for location of workable service connections for each property. The Contractor shall document those locations on the tie sheets and obtain a confirmation signature from the connection owner.

02000.4 METHOD OF MEASUREMENT**02000.4.1 MOBILIZATION**

Mobilization shall be measured by the lump sum.

02000.4.3 VISUAL RECORDS

Pre-Construction Photography shall be measured by the lump sum.

02000.4.4 SERVICE CONNECTION DOCUMENTATION

Service Connection Documentation shall be measured by the lump sum.

02000.5 BASIS OF PAYMENT

02000.5.1 Payment for Mobilization shall conform to Section 109 of MAG Standard Specifications.

END OF SECTION

02005.1 DESCRIPTION

Traffic Control shall be regulated in accordance with the MAG Specifications, the Manual on Uniform Traffic Control Devices (MUTCD), latest edition, and any other related technical specifications.

02005.1.1 RELATED WORK

Section 01019 – Measurement and Payment
Section 01300 – Submittals

02005.1.2 SUBMITTALS

Not used.

02005.3 TRAFFIC CONTROL REQUIREMENTS

At the time of the pre-construction conference, Contractor shall designate an American Traffic Safety Services Association (ATSSA) certified individual, who is well qualified and experienced in construction traffic control and safety, to be responsible for implementing, monitoring, and altering traffic control measures, as necessary, to ensure that traffic is carried through the work area in an effective manner and that motorists, pedestrians, bicyclists, and workers are protected from hazard including, but not limited to, motor vehicle accidents. The City shall designate a representative who will oversee and monitor the Contractor's agent and enforce the City's requirements set forth herein. The Contractor covenants to give the City any assignment and/or assurances which may be necessary to affect such right of direct enforcement.

02005.3.1 RESPONSIBILITIES

The Contractor is solely responsible for, and assumes full liability for, the traffic control relating to this project. The Contractor shall submit a final traffic control plan to the City for its review and approval no less than one (1) week prior to commencing work under this Contract. Traffic, as referenced herein, shall include any and all motor vehicles, bicyclists, and pedestrian traffic on roadways, sidewalks, bicycle paths, alleys, and/or rights of way, at, TS-7, attendant to, and/or adjacent to the Project. Any requests for road closures must be submitted to the City no less than 20 working days prior to the proposed road closure.

In the event alteration of traffic control is required for work or services provided herein, alterations shall be made in accordance with the latest edition of Part VI of the Manual on Uniform Traffic Control Devices, "Traffic Control for Streets and Highway Construction and Maintenance Operations". The most restrictive provision shall apply. Any and all revisions relating to traffic and/or traffic control shall be submitted to the City for review and approval in the City's sole discretion.

The Contractor is solely responsible for any and all loss, damage, replacement, or repair necessitated to any traffic signal equipment, traffic signal conduit, and/or circuits, arising from or relating to the Contractor's work or services performed hereunder. The Contractor shall have all repairs performed immediately at its sole expense by a licensed electrical contractor with experience in traffic signal repair, subject to pre-approval by the City. Any and all repairs and/or replacement costs expended by the City in this regard shall be reimbursed by the Contractor at twice the City's actual cost.

The Contractor shall notify all adjacent or affected residents or businesses at least two (2) weeks in advance of any street, alley, sidewalk, and/or driveway closures or modifications, and make suitable arrangements to have all vehicles moved to a satisfactory location outside the closed area. Pedestrian access shall be maintained along the length of the project at all times per the requirements of the Americans with Disabilities Act and as approved by the City. The Contractor shall abide by applicable speed limits. Additional information may be obtained by contacting the City's Traffic Engineering Section.

Temporary barricades shall be regulated in accordance with the Manual on Uniform Traffic Control Devices, latest edition. No additional payment by the City will be made to the Contractor or its subcontractor for temporary barricades, unless otherwise specified in the bid.

The Contractor shall provide law enforcement officers for traffic control per Section 401 of the MAG Specifications and City's Supplements to MAG.

02005.4 METHOD OF MEASUREMENT

The method of measurement shall be per Section 01019.3.

02005.5 BASIS OF PAYMENT

The basis of payment shall be per Section 01019.

All costs shall be provided for uniformed off-duty law enforcement officers, or pilot cars, with driver as may be required by the approved traffic control plan. As per MAG and as noted elsewhere in the plans and specifications, all other costs associated with traffic control and public safety devices including but not limited to: permit fees; message boards; signs; barricade; vehicle and pedestrian control devices; flagmen; are considered subsidiary to the project and shall be incorporated into unit prices bid per linear foot of water line in the bid table.

END OF SECTION

02020.1 DESCRIPTION

Furnish and provide labor and equipment for investigation of existing miscellaneous pipelines, wires or cables, and other miscellaneous sub-surface features as required by the Engineer. Surface Investigation shall conform to MAG Standard Specifications.

02020.1.1 RELATED WORK

Section 01510 - Protection of Existing Improvements

02020.1.2 SUBMITTALS

Not used.

02020.1.3 DEFINITIONS

Not used.

02020.2 MATERIALS

The Contractor shall provide a backhoe and qualified operator; laborer with hand shovel; appropriate fuel and lubricants, necessary equipment servicing materials; and appropriate equipment for transporting the backhoe to perform the investigation. The backhoe shall be a rubber tired CASE 580 backhoe, or an approved unit of equivalent or greater size and capacity, having accumulated not more than 5,000 hours operating time.

02020.3 CONSTRUCTION REQUIREMENTS**02020.3.1 EXPOSURE BY EXCAVATION**

When directed by the Engineer, the Contractor shall excavate and expose miscellaneous pipelines, structural features, soil materials and other underground features which may be present at the work site. The location and extent of exposure shall be determined on site by the Engineer. Designation of such areas shall be made in writing, usually in the form of a Work Order, by the Engineer.

02020.3.2 REPLACEMENT OF EXCAVATED MATERIALS

Work required hereunder shall include replacement of excavated materials sufficiently to restore the site to a safe condition as determined by the Engineer. Full restoration of materials such as pavement, concrete slab work, sod, etc., in the investigated area will be accomplished in accordance with the Contract Documents and as directed by the Engineer.

02020.4 METHOD OF MEASUREMENT**02020.4.1 MEASUREMENT BY HOURS OF WORK**

Measurement of subsurface investigation shall be made by counting the actual number of hours of work completed by the machine and operator to investigate miscellaneous underground features as required by the Engineer. No allowance of time will be made for transporting the backhoe to and from the job site when the backhoe is located on the site of the Contract.

02020.4.2 MEASUREMENT FOR OTHER ITEMS OF WORK

When restoration of the excavated area requires provision of pavement, concrete slab work, sod, etc., separate measurement will be made for those materials in accordance with the respective requirement(s) for measurement of that item in the Contract Documents.

02020.5 BASIS OF PAYMENT

The accepted quantity of work will be paid for at the contract unit price of:

PAYMENT ITEM	UNIT
Subsurface Investigation	Hour

When provision of designated materials is required for restoration of the excavation, payment for such materials shall be made in accordance with the respective provisions of the Contract documents.

END OF SECTION

02105.1 DESCRIPTION

This section covers obtaining permission, permits, clearances, etc.; as necessary to develop source(s), purchasing or manufacturing, loading, hauling, placing and compacting earthwork materials described herein, as shown on the Drawings and/or required by these Specifications. Earthwork Materials shall conform to MAG Standard Specifications.

02105.1.1 RELATED WORK

MAG Section 206 – Structure Excavation and Backfill
MAG Section 220 – Riprap Construction
MAG Section 301 – Subgrade Preparation
MAG Section 601 – Trench Excavation, Backfilling, and Compaction
MAG Section 702 – Base Materials
MAG Section 710 – Asphalt Concrete
Section 1300 – Submittals

02105.1.2 SUBMITTALS

When the Bid Schedule indicates quantities of materials described in this section in excess of 50 cubic yards or 50 tons, or when requested otherwise by the Engineer, the Contractor shall provide test results from a certified independent laboratory which has sampled and performed the prescribed test(s) for those materials.

02105.1.3 DEFINITIONS

Granular Material - Material for which the sum of plasticity index (AASHTO T-90) and the percent of material passing a No. 200 sieve (AASHTO T-27) shall not exceed 23.

Silt - Material which passes the No. 200 (AASHTO T-11) sieve and has a plasticity index not greater than 10.

Clay - Material which passes the No. 200 sieve and has a plasticity index greater than 10.

Bedding - Materials placed immediately around and adjacent to pipe installed in trenches.

Borrow - Material obtained from a source away from the site on which installed and/or excavated and used to supplement insufficient quantities of material required.

02105.2 MATERIALS**02105.2.1 STRUCTURAL BACKFILL**

Structural Backfill shall be per MAG 206 and the Drawings.

02105.2.2 “PIPE ZONE” MATERIAL

“Pipe Zone” materials include all material defined in MAG 601.4: foundation, bedding, haunching, and backfill. “Pipe Zone” materials shall be per MAG 601.

02105.2.3 SAND

Sand shall be graded granular material which passes a 3/8-inch sieve, with not more than 10 percent passing the No. 200 sieve (AASHTO T-27) and free from cinders, ashes, wood, vegetation, frozen or other deleterious material.

02105.2.4 AGGREGATE BASE COURSE

Aggregate base course shall be per MAG 702 and the Drawings.

02105.2.5 BITUMINOUS SURFACING

Plant mix bituminous material shall be per MAG 710.

02105.2.6 DRAIN GRAVEL

Drain gravel consists of washed natural gravel or crushed rock, with a maximum particle size of 1-inch, with not more than 40 percent passing the No. 4 sieve, with 100 percent being retained on the No. 10 sieve, and without any deleterious material.

02105.2.7 RIPRAP

Riprap materials shall be per MAG 220 and the Drawings.

02105.2.8 SUBGRADE GRANULAR FILL

Subgrade granular fill consists of well graded granular soils with a maximum of 50 percent passing the No. 4 sieve and a maximum of 20 percent passing the No. 200 sieve and no materials greater than 4-inches in diameter.

02105.2.9 ½” CRUSHED ROCK

½” Crushed rock shall meet the requirements of the Standard Specifications for Public Works Construction, Section 200-1.2, except that the grading shall be as follows:

Sieve Size	% Passing
1/4"	100
No. 4	50 - 90

Color shall be selected by the Owner.

02105.2.10 GRAVEL SURFACE COARSE MATERIAL

- a) The surface course shall meet the requirement of ASTM D 1241 for Type I with Gradation C or any other gradation, which will grade within the following limits:

Percent Passing	Sieve Size	by Weight
	3/4"	100
	No. 4	38 - 65
	No. 8	25 - 60
	No. 30	10 - 40
	No. 200	3 - 12

- b) Gravel road surfacing shall meet the following requirements:

- i. Percentage of Wear: When tested in accordance with ASTM C 131, the percentage of wear shall not exceed 40 percent after 500 revolutions.
- ii. Plasticity Index: When tested in accordance with ASTM D 4318, the plasticity index shall not be more than five (5).
- iii. Liquid Limit: When tested in accordance with ASTM D 4318, the liquid limit shall not be more than 25 percent. The moisture content of the fill matrix at the time of compaction shall be neither less than one (1) percent below optimum moisture content nor one (1) percent above optimum moisture content.

02105.3 CONSTRUCTION REQUIREMENTS

02105.3.1 LOCAL GOVERNMENT SPECIFICATIONS

Differences may exist between the requirements of these Specifications for sitework materials such as backfill, bedding, untreated base course and bituminous surface course, and those of local government entities. Such differences may affect Contract prices; therefore, when Contract Work falls within the boundaries of any local government, the Contractor shall make himself aware of that entity's specifications for those materials. If differences exist between those specifications and these, unless otherwise approved by the Engineer, the more stringent ones shall apply.

02105.3.2 BORROW AND DISPOSAL SITES

The Contractor shall, at its own expense, secure all necessary access and borrow sites for acquisition or removal and to dispose of excess backfill or waste materials, unless otherwise shown on the Drawings.

02105.3.3 SCALES

When ton weight is to be used to determine quantities of earthwork materials used, the Contractor shall provide his own scales or access to other scales at his own cost. Scales shall be certified accurate. Include certification in submittals.

02105.3.4 MATERIAL PLACEMENT

Unless stated otherwise, material placement shall be per MAG standards. Gravel road shall be installed per Section 02120 and MAG standards.

02105.4 METHOD OF MEASUREMENT

The method of measurement shall be incidental to other bid items.

02105.5 BASIS OF PAYMENT

The basis of payment shall be incidental to other bid items.

END OF SECTION

02500.1 DESCRIPTION

This work includes removal and restoration of existing features, public or private, including but not limited to asphalt or concrete pavement, concrete structures, curb and gutter, sidewalk, gravel surfacing, driveways, crosswalks, landscaping, field crops, irrigation ditches, fences, culverts, buried or exposed utilities, abandoned utilities, small utility buildings and the disposal of resulting waste materials and debris.

02500.1.1 RELATED WORK

Section 01510 - Protection of Existing Properties
MAG Section 201 - Clearing and Grubbing
MAG Section 601 - Trench Excavation, Backfilling and Compaction
Section 02511 - Hot Plant Mix Bituminous Surfacing
Section 02520 - Pavement Cutting
Section 02900 - Landscaping

02500.1.2 SUBMITTALS

When any improvement not owned by the Owner is designated for restoration work, then, upon completion of such restoration, the Contractor shall obtain a written statement of acceptance or release from the responsible owner of the feature. This statement, in turn, will be submitted to the Engineer for his review and approval prior to acceptance of the work for payment.

02500.1.3 DEFINITIONS

Not used.

02500.2 MATERIALS**02500.2.1 GENERAL**

When restoration of a feature is indicated in the Contract Documents, such work shall be accomplished so as to restore the feature to its original, or better, condition and/or function as it existed prior to removal.

It is recognized that exact duplication of materials cannot always be achieved, but reasonable effort is expected from the Contractor to restore the feature with materials which will provide the same or better service and appearance as observed prior to removal.

All materials shall be new.

02500.2.2 BITUMINOUS SURFACE

- 02500.2.2.1 PRIMER OR TACKER COAT - Shall be an approved bituminous material such as type MC-70-250, SS1, or CS-1.
- 02500.2.2.2 PATCHING AND REPAIR - Plant mix material that meets or exceeds the requirements of Section 02511 herein, or of the local State Department of Transportation for asphalt surface road repair, shall be used for patching and repair.
- 02500.2.2.3 SURFACING - Shall be hot mix bituminous surfacing, meeting or exceeding the requirements of Sections 02511 herein, or of the local State Department of Transportation for asphalt surface road repair.

02500.3 CONSTRUCTION REQUIREMENTS**02500.3.1 UNCLASSIFIED REMOVAL AND RESTORATION**

- 02500.3.1.1 EXISTING IMPROVEMENTS - All existing facilities disturbed by the Contractor in prosecution of the Work, including but not limited to asphalt or concrete pavement, concrete structures, curb and gutter, sidewalk, gravel surfacing, driveways, crosswalks, landscaping, field crops, irrigation ditches, fences, culverts, buried or exposed utilities, abandoned utilities, small utility buildings or any other structures or obstructions designated to be removed on the Drawings, by the Engineer, or these Specifications, shall be removed, cleaned up, and then restored or replaced in kind by the Contractor in new condition.
- 02500.3.1.2 ADJACENT IMPROVEMENTS - Care shall be exercised in such removal to assure that adjacent facilities or structures, which are to remain, are not disturbed. Any damage to such existing facilities or structures resulting from carelessness or negligence on the Contractor's part shall be satisfactorily restored to new condition at the Contractor's expense.
- 02500.3.1.3 VEGETATION - Trees, shrubs, and other landscape plants designated to be saved for replanting shall be carefully removed, bundled, set aside and protected for replanting by the Contractor.

Replanting of landscape items shall be performed in accordance with Section 2900.

02500.3.2 TOPSOIL

- 02500.3.2.1 REMOVAL AND PROTECTION - In all construction areas where re-growth of vegetation is desired, and when called for by the Contract Documents, the Contractor shall remove, segregate, stockpile, store, and protect topsoil during excavation in accordance with Section 02900. Topsoil shall be kept free from contamination from foreign materials and other soils. The Contractor shall arrange construction activities to avoid damage or disturbance to the stockpiled soil.

02500.3.2.2 REPLACEMENT - When backfill operations have been completed, the topsoil shall be replaced and restored to the original contours or as called for on the Drawings, in accordance with Section 2900 of these Specifications.

02500.3.3 GRAVEL SURFACE

02500.3.3.1 REMOVAL - When restoration of graveled driveways, roadways, or parking areas is required, the existing gravel surfacing shall be graded off and stockpiled safely away from ongoing work activities, to prevent contamination with subsurface materials. It may then be reapplied and compacted during restoration activities.

02500.3.3.2 RESTORATION - Areas to be restored shall be backfilled and graded to uniform lines and compacted to the density prescribed for trenching in MAG Section 601. Existing gravel surfacing materials shall then be replaced in uniform 3-inch layers compacted to 95% of maximum density. After compaction, the affected area shall be graded smooth. Sufficient new material of equal or better quality shall be applied and mixed in, to replace materials lost during prosecution of the Work, to ensure a 3-inch minimum gravel cover after compaction and grading.

02500.3.4 BITUMINOUS SURFACE

02500.3.4.1 REMOVAL - Bituminous pavement surface shall be removed and restored in accordance with this paragraph unless provisions for restoration are made in other Sections of these Specifications. The pavement surface, public or private, designated for removal shall be removed to neat lines, which shall be cut in accordance with Section 02520. No ripping or rooting will be permitted outside of the limits of the cut lines.

Existing driveways, sidewalks, etc., which do not match the new finish grade as shown on the Drawings, also shall be removed preparatory to restoration work.

02500.3.4.2 DISPOSAL - Surfacing materials removed shall be disposed of in accordance with Section 1520 of these Specifications, and will not be permitted in the backfill, except as specifically authorized by the Engineer and in accordance with local requirements.

02500.3.4.3 RESTORATION – Restoration of bituminous surface shall proceed according to the following steps:

- First, the sub-grade shall be graded to a uniform surface, and 6 inches of Untreated Base Coarse (UBC) gravel shall be placed over the area in lifts not thicker than 3 inches, compacted to 95% of its maximum density.
- Then, the exposed edges of existing pavement shall be primed with a material approved for this purpose.
- Unless shown otherwise on the drawings or required otherwise by the Engineer, hot or cold mix bituminous surfacing shall be spread and compacted in individual, 3-inch maximum lifts over the base course. Minimum thickness of

the new bituminous surfacing layer shall be equal to the adjacent surface thickness but shall be not less than 3 inches thick when compacted to 95% of its maximum density.

- Rolling operations shall be conducted in such a manner that shoving or distortion will not develop beneath the roller. The surface shall be finished to a smooth, uniform line and grade with surface deviations not exceeding plus or minus 1/4 inch in 10 feet, unless the surface is subject to more stringent State, County, or Municipal requirements. The determination of smoothness compliance may be made with a straight edge or string line at the option of the Engineer. Any irregularities shall be satisfactorily corrected at the sole expense of the Contractor.
- Existing driveways, sidewalks, etc., which were removed because they did not match the new finish grade, shall be replaced and restored to their original or better condition to match the new finish grade shown on the Drawings, or as directed by the Engineer.

02500.3.5 REMOVAL AND RESTORATION OF CONCRETE IMPROVEMENTS.

- 02500.3.5.1 REMOVAL - Existing concrete pavement in streets, alleys, driveways, sidewalks, etc., public or private, shall be cut in accordance with Section 02520, and removed to the lines indicated on the Drawings, or as directed by the Engineer. No ripping or rooting will be permitted outside of the limits of saw cut lines.

Removal of existing concrete necessary for the improvements shall conform to the provisions of Section 350 of the MAG Specifications. All concrete to be removed shall be removed to the nearest sidewalk joint line. Backfill and compaction of all excavated areas shall be to the densities as prescribed in Section 301 of the MAG Specifications. The Contractor shall provide all materials, equipment, and labor to sawcut and remove the existing concrete as indicated in the plans. All surplus materials shall be immediately hauled from the job site and disposed in accordance with Section 205 of the MAG Specifications.

Existing driveways, sidewalks, etc., which do not match the new finish grade as shown on the Drawings, also shall be removed preparatory to restoration work.

Concrete sidewalk per MAG Standard Detail 230 shall conform to MAG Specification Sections 301, 340, 725, 729 and MAG Standard Detail 230. The contractor shall provide all materials, equipment, and labor to install the sidewalk per MAG Standard Detail 230 in place. Sidewalk ramp per MAG Standard Detail 235-2 shall conform to MAG Specification Sections 301, 340, 725 and 729. The contractor shall provide all materials, equipment and labor to install the Sidewalk ramp per MAG Standard Detail 235-2.

Removal of existing curb and gutter necessary for the improvements shall conform to the provisions of Section 350 of the MAG Specifications. All concrete curb and gutter to be removed shall be removed to the nearest sidewalk joint line. Backfill and compaction of all excavated areas shall be to the densities as prescribed in Section

301 of the MAG Specifications. The Contractor shall provide all materials, equipment, and labor to sawcut and remove the existing concrete curb and gutter as indicated in the plans. All surplus materials shall be immediately hauled from the job site and disposed in accordance with Section 205 of the MAG Specifications.

02500.3.5.2 DISPOSAL - All materials removed shall be disposed of in accordance with Section 1520 of these Specifications, and will not be permitted in the backfill, except as specifically authorized by the Engineer and in accordance with local codes.

02500.3.5.3 RESTORATION - Sub surface preparations shall be the same as those in paragraph 02500.3.4.3 above.

- Those existing driveways, sidewalks, etc., which were removed because they did not match the new finish grade, shall be replaced and restored to their original or better condition to match the new finish grade shown on the Drawings, or as directed by the Engineer.

02500.3.6 REMOVAL AND RESTORATION OF FENCES

When necessary to remove any fence to facilitate its operation, the Contractor shall obtain prior agreement with the owner of the fence for its removal. Temporary containment measures shall be provided, if needed, at no additional expense to the Owner. As soon as practical, the permanent fence shall be restored to its original condition or better.

02500.3.7 RESTORATION OF IRRIGATION DITCHES

Restoration of irrigation ditches shall be made in such a manner that the ditch configuration and size will be equivalent to its original condition and the ditch will be located on its original alignment. Any embankment required to restore the original slope of the ditch will be layer compacted with mechanical compaction equipment to 90% of maximum dry density determined by AASHTO T-99.

02500.3.8 REMOVAL OF EXISTING FITTING

Removal of existing fittings shall conform to MAG Specifications and the City's Supplements to the MAG Specifications. The Contractor shall provide all materials, equipment, and labor to remove the existing fittings as indicated in the plans.

02500.3.9 CLEANUP

Areas of construction activity shall be left in a condition of uniform grade, blending into pre-existing contours and concealing, as much as possible, evidence of construction activity by back dragging or raking to conceal tire marks. Cleanup and disposal of surplus materials shall be performed in accordance with Section 1520.

02500.4 METHOD OF MEASUREMENT

02500.4.1 NO BID SCHEDULE LINE ITEM

When the Bid Schedule in the Contract does not contain a line item for "Removal and/or Restoration of Surface Improvements", then this work will be considered incidental to other items included in the Bid Schedule, and no separate measurement shall be made for this work.

02500.4.2 "DESIGNATED AREA" LINE ITEM

Measurement for removal and/or of surface improvements in a designated area shall be the "lump sum" of the work required to remove and properly dispose of materials resulting from removal.

02500.4.3 "DESIGNATED FEATURE" LINE ITEM

Measurement for removal and/or restoration of designated features shall be per unit as described in the Bid Schedule.

02500.4.4 BITUMINOUS SURFACE PAY LIMIT

Measurement for bituminous surface removal and replacement shall be made by multiplying the pay limit by the actual length of removal and replacement in lineal feet as determined using a tape measure or other accurate measuring device.

In general, for pipe trench excavation, the pay limit shall be determined by the formula $W = OD + 18$ inches (pay limit width equals pipe outside diameter plus 18 inches), rounded up to the nearest standard bucket width. Actual measurement may be modified according to information indicated on the Drawings or as directed by the Engineer.

The pay limit for removal of bituminous surface for other purposes shall be as shown on the Drawings or directed by the Engineer.

02500.4.5 DAMAGED ITEMS

Measurement of items damaged or removed as a result of the Contractor's negligence shall not be allowed and no payment will be made under this contract.

02500.5 BASIS OF PAYMENT

The accepted quantities will be paid for at the contract unit prices as follows:

**REMOVAL AND REPLACEMENT OF
SURFACE IMPROVEMENTS****SECTION
02500**

PAY ITEM	UNIT
Removal of Site Surface Improvements	Lump Sum
Removal of <i>(Name of Structures)</i>	Each
Removal of Sidewalk	Square Yard
Removal of Fences	Lineal Foot
Removal of Driveway Slabs	Square Yard
Removal of Curb and Gutter	Lineal Foot
Removal of Bituminous Surface	Square Yard
Replace <i>(Name of Structure)</i>	Each
Replace <i>(Thickness)</i> Sidewalks	Square Yard
Replace <i>(Thickness)</i> Driveway Slabs	Square Yard
Replace <i>(Thickness)</i> Bituminous Surface	Square Yard
Replace <i>(Description)</i> Fence	Lineal Foot
Replace <i>(Description)</i>	Lineal Foot or Lump sum
Restore <i>(Description)</i>	Lineal Foot or Lump Sum

END OF SECTION

02510.1 DESCRIPTION

This section covers all sampling and testing of all materials used on this project. The materials sampling and testing shall be done by an independent certified testing company and all testing reports shall be submitted to the Engineer within a reasonable time period. All material and sampling shall be in accordance with the General Conditions, these specifications, and MAG Section 106.

If there is a conflict between requirements the order of precedence is as follows: General Conditions, these specifications, then MAG Section 106.

02510.1.1 RELATED WORK AND REFERENCED SECTIONS

MAG Section 106 – Control of Materials
MAG Section 601 – Trench Excavation, Backfilling, and Compaction
MAG Section 725 – Portland Cement Concrete
Section 01300 – Submittals
Section 01400 – Quality Control

02510.1.2 SUBMITTALS

All sampling and test reports shall be submitted in accordance with Section 01300.

02510.1.3 DEFINITIONS

Not Applicable

02510.1.4 MODIFICATION TO MAG

Section 106.2, second paragraph shall be deleted completely and replaced with the following:

The Contractor will pay for the initial or normal test required by the Engineer to guard against unsuitable materials or defective workmanship. Additional tests, required due to failure of the initial or normal test(s), shall be paid for by the Contractor. The Engineer will designate the laboratory which will accomplish the additional test(s).

02510.2 MATERIALS

Not Applicable

02510.3 CONSTRUCTION REQUIREMENTS**02510.3.1 TESTING**

The minimum testing requirements are as follows: All Materials sampling and testing shall be done by an independent certified testing company and all testing

reports shall be submitted to the Engineer within a (2) two-week time period or sooner.

02510.3.1.1 EMBANKMENT

- Maximum Laboratory Density 1 test in each soil type
- Field Density and Moisture 1 test per 2000 square yards

02510.3.1.2 BACKFILL

- Field Density and Moisture 2 tests per culvert or structure
(Refer to Section 02200 for Trench Excavation and Backfill Testing)

02510.3.1.3 UNTREATED BASE COURSE

- Sieve Analysis 1 test per production day
- Maximum Laboratory Density 1 test per 10,000 tons
- Field Density and Moisture 1 test per 2000 square yards

02510.3.1.4 ASPHALT CONCRETE PAVEMENT

- Mix design (ASTM 1559 and AASHTO T-283) 1 mix design for the project
- Asphalt temperature As necessary to assure compliance
- Gradation and Asphalt Content 2 tests per production day
- Field Density 1 test per 1600 square yards
- Mix and Laydown Temperature As necessary to assure compliance
- Thickness 1 test per 1600 square yards

02510.3.1.5 PORTLAND CEMENT CONCRETE

- Slump Test 1 test per load of concrete
- Air Test 1 test per load of concrete
- Strength Test 1 compressive strength per 50 cubic yards

02510.4 METHOD OF MEASUREMENT

Measurement for this pay item will be by the lump sum.

02510.5 BASIS OF PAYMENT

The accepted quantities will be paid for at the contract unit price:

PAY ITEM	UNIT
Materials Sampling and Testing	Lump Sum

END OF SECTION

02511.1 DESCRIPTION

Includes manufacturing, transporting, laying and compacting hot mixtures of bituminous surfacing for roads, parking areas, sidewalks and other traffic surfaces. Hot Plant Mix Bituminous Surfacing shall be according to this specification and in accordance with MAG Section 321 and 710.

02511.1.1 RELATED WORK

MAG Section 321 – Placement and Construction of Asphalt Concrete Pavement
MAG Section 710 – Asphalt Concrete
Section 02500 – Removal and Replacement of Surface Improvements

02511.1.2 SUBMITTALS

Submittals per Section 01300 and MAG Standard Specification 106.

02511.1.3 MODIFICATION TO MAG

Asphalt concrete utilized as surfacing shall be in accordance with specifications in MAG Section 710 with the following stipulations:

1. Surfacing shall be hot-plant mixed and delivered from the plant to the site at a temperature not greater than 325 degrees Fahrenheit;
2. Cold mix temporary patches shall be utilized, but only until such time that temperature conditions permit as stated below and hot mix asphalt is available;
 - a. Asphalt concrete shall be deposited only when the subgrade surface is dry, and when the ambient temperature in the shade is 60 degrees Fahrenheit and is rising.
 - b. Asphalt concrete shall not be deposited when it is foggy, rainy or when the base on which the concrete is to be deposited is in a wet or frozen state. By “wet” is meant in excess of optimum moisture.
3. Hot mix asphalt shall be placed as soon as temperature conditions and availability allow. For the purpose of this section, “availability” is defined as suitable hot mix asphalt concrete being available within a 40-mile radius and the cumulative hot mix asphalt requirements of any permittee equals being available within a 40-mile radius and the cumulative hot mix asphalt requirements of any permittee equals or exceeds five cubic yards;
4. The gradation requirements of Table 710-2 shall be as shown below:

Table 710-2					
Gradation Requirements					
– Percent by Weight Passing					
Sieve Size (mm)	Designation (mm)				
	9.5	12.5	19	25	37.5
50.0	–	–	–	–	100
37.5	–	–	–	100	90 – 100
25.0	–	–	100	90 – 100	<90
19.0	–	100	90 – 100	<90	–
12.5	100	90 – 100	<90	–	–
9.5	90 – 100	<90	–	–	–
4.75	<90	–	–	–	–
2.36	32 – 67	28 – 58	23 – 49	19 – 45	15 – 41
0.075	5.0 – 10.0	5.0 – 10.0	5.0 – 8.0	1.0 – 7.0	0 – 6.0

5. MAG 710 requirements are modified to require air voids of 3.0 percent to 5.0 percent with a target of 4.0 percent instead of the 2.8 percent to 6.2 percent as stated. The City retains the right to require removal when air voids exceed 5.0 percent.

02511.2 METHOD OF MEASUREMENT

The method of measurement shall be per Section 01019.3.

02511.3 BASIS OF PAYMENT

The basis of payment shall be per Section 01019.3.

END OF SECTION

02520.1 DESCRIPTION

This section covers cutting through designated sections of bituminous and/or concrete pavement surface with approved equipment in preparation for pavement removal.

02520.1.1 RELATED WORK

MAG Section 601 – Trench Excavation, Backfill and Compaction
Section 02500 - Removal and Replacement of Surface Improvements

02520.1.2 SUBMITTALS

Not used.

02520.1.3 DEFINITIONS

Not used.

02520.2 MATERIALS

Not used

02520.3 CONSTRUCTION REQUIREMENTS**02520.3.1 SAW CUTTING**

02520.3.1.1 NEATNESS IN CUTTING - Pavement cuts shall be made with a saw to produce straight vertical cuts through the full depth of the surfacing layer. The Contractor is responsible to preserve and maintain a neat clean edge on the cut pavement to facilitate pavement repair or replacement under Section 02500.

02520.3.1.2 CUT MATERIALS TO BE LEFT IN PLACE - Cut pavement materials shall be left in place. Removal of cut pavement will be included as part of other work items in this Contract.

02520.3.1.3 BROKEN PAVEMENT - When pavement has deteriorated or is severely cracked and broken, the Contractor shall discontinue cutting operations and obtain direction from the Engineer as to how cutting should proceed.

If pavement is broken after sawcutting and prior to replacement, the Contractor shall re-cut the pavement. Such re-cutting shall not be measured for payment.

02520.3.2 WHEEL CUTTING

With advanced written approval of the Engineer, wheel cutting may be substituted for saw cutting of bituminous pavement surface. Wheel cutting operations shall be subject to the same requirements as those for saw cutting pavement above.

02520.3.3 ROTOMILLING

Rotomilling of existing pavement is an acceptable alternative to saw cutting, providing that the resulting pavement edges are left clean and neat. Rotomilled material may be suitable for trench backfilling or as a substitute for road base. For such use, rotomilled material must meet the following conditions: that no chunks or pieces larger than one inch in any dimension are used, that it is placed in separate lifts from untreated base course, that it is compacted to 95% of its maximum density, and that it is acceptable to the Engineer and to the Owner.

02520.4 METHOD OF MEASUREMENT

Measurement for pavement cutting shall be made using a tape measure or other accurate measuring device to determine the number of lineal feet of pavement cut. This length shall be multiplied by the actual depth of the cut pavement layer, measured in inches, to give the number of inch feet of cut.

An alternative method of measurement is for the Engineer to determine that all pavement cutting shall be paid for by the measured lineal feet without regard to depth.

02520.5 BASIS OF PAYMENT

The accepted quantities will be paid for at the contract unit price for:

PAY ITEM	UNIT
Pavement Sawing	Inch/Foot
Pavement Sawing	Lineal Feet

END OF SECTION

02553.1 GENERAL

02553.1.01 SUMMARY

- A. Section includes: Requirements for temporary bypass pumping of wastewater flows through 8-inch sewer line located on SR179 to complete the Work.
- B. Related sections:
 - 1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
 - 2. It is the Contractor's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of Contractor's Work.

02553.1.02 REFERENCES

- A. National Fire Protection Association (NFPA):
 - 1. 820 - Standard for Fire Protection in Wastewater Treatment and Collection Facilities.

2553.1.03 GENERAL REQUIREMENTS

- A. Provide all necessary labor, tools, materials, and supervision to provide temporary bypass pumping and flow control in accordance with the requirements of this Section.
- B. Operate and maintain bypass pumping facilities including, but not limited to, pumps, piping, valves, controls, and monitoring until the involved portion(s) of the Work have been completed to the satisfaction of the Owner/Engineer.
- C. Bypassing wastewater in a way that assures that no wastewater is allowed to leak outside of the bypass system. If leakage does occur, pay all fines and reimburse the Owner for all costs associated with the cleanup of the leakage, as well as costs associated with legal actions.
- D. Accept responsibility for any release of wastewater and for penalties associated with bypass pumping activities, including commissioning, operating, and decommissioning of bypass pumping facilities.
- E. Coordinate the placement of the bypass piping and pumping equipment with the Owner.
- F. The means and methods of accomplishing and maintaining the temporary bypass pumping and associated facilities shall be the sole responsibility of the Contractor.

- G. Except as otherwise specified or authorized in writing, no interruption of wastewater flow shall be permitted throughout the duration of the project. Contractor is responsible for all wastewater overflows during construction of this work and bypass operations.
- H. Take precautions to prevent any potential spillage of wastewater from entering the stormwater system.
- I. Temporary bypass pumping operation:
 - 1. Limited to the months, times, or seasons indicated, unless approved in writing by the Engineer.
 - 2. Continuous operation for 24 hours per day and 7 days per week is anticipated during the period of Work.
- J. Continuously monitor temporary bypass pumping.
- K. Provide qualified operators continuously during operation of the bypass systems.
- L. Equipment and personnel cannot be located on residential property unless written approval has been provided by the resident and the City.

02553.1.04 SUBMITTALS

- A. Prepare and submit a project-specific wastewater bypass pumping plan with completed wastewater bypass pumping checklist for approval.
 - 1. Be advised that the bypass plan must provide accessibility for Owner operations and vehicular traffic in accordance with Owner requirements.
- B. Wastewater bypass pumping plan: Include the following at a minimum:
 - 1. Capacities and sizes of pumps, standby equipment, and power requirements, if applicable.
 - 2. Design calculations of the system and selected equipment, including flow, TDH with static head including all friction and minor losses, pump curves showing operating range of flow and TDH at minimum, average, and peak flow.
 - 3. Standby power generator size and location for electrically-driven bypass pumps (if used).
 - 4. Downstream discharge plan.
 - 5. Pipe thrust and restraint types, sizes, and locations.
 - 6. Temporary pipe supports and anchoring required.

7. Plans for access to bypass pumping locations.
8. Schedule that shows duration of temporary bypass pumping including milestones for installation, maintenance, and removal of equipment and accessories.
9. Means and methods of installing, operating, monitoring, and maintaining the temporary bypass pumping.
10. Plan indicating bypass pumping line locations.
11. Include details showing methods used to protect and identify the bypass pumping lines through the length of the bypass route.
12. Detailed plans of a backup system.
13. Address access for operators and vehicular traffic.
14. Mechanical plan showing equipment, valves, pipe sizes and locations, pipe materials, dimensions, vehicle access (where applicable), pedestrian access (where applicable).
15. Schematic drawings and written description of the control system and its' operating sequence.
16. Proposed type and location of collection system plugs.
17. Catalog cut sheets for pumping equipment, pipe and fittings, valves.
18. Emergency response plan.
19. Staffing plan.
20. Spill prevention and cleanup plan.
21. Noise control system.
22. Health and safety plan.
23. Surge or water hammer calculations and attenuation means.
24. Maintenance history of pumps.
25. Operating permits from jurisdictional air quality agency for each engine.

2553.1.04 QUALITY ASSURANCE

- A. Contractor's qualifications:
 1. Minimum 5 years' experience in performing substantially similar temporary bypass operations.

2. Submit evidence of satisfactory operation of temporary bypass facilities similar to those specified in at least 5 separate projects in accordance with the specifications, including references.
- B. Fulfillment of the specified experience requirements shall be a condition of acceptance.

PART 2 PRODUCTS**02553.2.01 CAPACITY**

- A. Pumps, piping and accessories: Of adequate capacity and size to handle the range of wastewater flows from minimum flow to peak flow.
- B. Piping, fittings, and all accessories shall withstand 2.0 times the maximum pressure including surge.
- C. Maintain on site sufficient equipment and materials to ensure continuous and successful operation of the bypass system.
1. Have standby pump(s) on site to provide 100 percent redundancy of the bypass system design Peak Flow.
 - a. The redundant pump(s) shall be plumbed, fueled, and ready for operation at all times.
 2. Provide sufficient bypass lines to provide 100 percent redundancy of the bypass system design Peak Flow.
 - a. The bypass lines and separate redundant lines shall be connected via a combined header that enables the shutdown and isolation of each individual line should a leak or rupture occurs.
 3. Maintain on site a sufficient number of valves, tees, elbows, connections, tools, pipe plugs, piping, and other parts or system hardware to ensure immediate repair or modification of any part of the bypass system as necessary.

02553.2.02 BYPASS PUMPS

- A. Provide a minimum of 2 pumps: 1 duty and 1 standby.
- B. Pump capacity: Sufficient to pump the anticipated peak hour flow with the largest pump out of service.
- C. Pumps: Packaged units with a skid base or trailer.
- D. Pumps: Fully automatic, self-priming, close-coupled centrifugal units that do not require use of foot valves or vacuum pumps for priming.
- E. Pumps shall use oil-lubricated mechanical seal.
- E. Pump materials: As follows:
 - 1. Volute: Cast iron.
 - 2. Impeller: Cast iron.
 - 3. Pump shaft: Type 431 stainless steel.
 - 4. Mechanical seal faces: Silicon carbide.
- G. Pumps shall be capable of passing 3-inch diameter solids, rags, rocks, hair, and other debris encountered in municipal wastewater.
- H. Pump driver: Diesel engine or 480-V electric engine and include the following:
 - 1. Minimum 48-hour capacity diesel fuel tank as defined by fuel consumption during peak pumping rate.
 - 2. Fuel gauge with red warning light when tank approaches empty.
- I. Pumps shall be capable of dry operation for up to 12 hours to accommodate large fluctuations in flow.
- J. Maximum pump speed: Not exceeding 2,200 revolutions per minute.
- K. The system shall include the following features:
 - 1. START/STOP OPERATION.
 - 2. Variable flow based on water level in suction structure.
 - 3. Instrumentation and controls for operation and monitoring for each pump.
- L. Electrical equipment, instrumentation, and accessories: Suitable for Class 1 Division 2 service as defined by NFPA 820.

- M. Comply with applicable air quality regulations.
- N. Utilize low noise level pumps as size permits manufactured by BakerCorp or Goodwin Quiet Pumps. Due to bypass into existing force mains, sound attenuated pumps may not be available for high head conditions. In this case, sound curtains are to be utilized for noise control.

02553.2.03 BYPASS PIPING

- A. Use HDPE piping for the temporary bypass pumping system. Piping integrity: 0 leakage.
 - 1. Include spill containment vessels or 'spillguards' as needed.
- B. Provide sewage type air release valve at high point in piping and containment spills from valves.
- C. Provide temporary ramps constructed over pipelines 6 inches in diameter or less to allow access to driveways.
 - 1. Bury pipelines larger than 6 inches in diameter crossing driveways, a minimum of 6 inches below the existing ground or pavement surface and backfilled with temporary asphalt concrete.
 - 2. No driveway access shall be blocked without the written authorization of the Owner.

2553.2.04 PIPE PLUGS IN EXISTING PIPE

- A. Pipe diameters 24 inches and smaller: Mechanical plugs with EPDM gaskets.
- B. Pipe diameters larger than 24 inches: Inflatable bag stoppers with 2 or more pieces. Provide 2 plugs in series.

2553.2.05 NOISE CONTROL

- A. Pumping equipment: Equipped with devices or enclosures for noise attenuation including but not limited to mufflers and/or acceptable noise panels or enclosures. Due to the high head requirements for bypass of flow into existing force mains, pumps may not be available with noise attenuation. In that case, sound curtains shall be provided around the pumps to meet the noise level requirements of this Specification.
- B. The noise level: The City of Sedona sound ordinance requires that the maximum permissible sound level limits be at or below 60 dBA from 7:00 AM to 10:00 PM and at or below 50 dBA from 10:00 PM to 7:00 AM as measured at any location at or within the property line of the receptor property.

2553.2.06 ODOR CONTROL

- A. The Contractor shall employ methods and procedures that mitigate the generation and discharge of objectionable odors to the surface environment at all times.
- B. Seal all open manholes with plastic or similar material around suction piping that is adequately taped or tied to maintain an odor barrier.
- C. All odor control methods shall be routinely inspected for maintaining of installation integrity.

PART 3 EXECUTION

2553.3.01 GENERAL

- A. Notify the Owner a minimum of seven (7) days prior to the Work and notify the Engineer at least 48 hours prior to bypassing or diverting flow in any of the pipelines or laterals.
- B. Place pumps, generators, and other equipment on a plastic tarp to protect against spills of petroleum products used by the equipment.
- C. Before taking process or pipeline out of service, verify that bypass system is fully operational and acceptable to Engineer. Testing of bypass system over a weekend period prior to taking pipeline out of service shall be performed.

2553.3.02 PROTECTION

- A. Be responsible for all bypass flows.
 - 1. Inspect the entire bypass pumping and piping system for leaks or spills at a frequency of not less than 4 times per day.
 - 2. Do not shutdown the temporary bypass system between shifts, on holidays or weekends, or during work stoppages without written permission from the Engineer.
- B. Provide trained and qualified attendants 24 hours per day 7 days per week until the bypassing is no longer required. The attendants shall:
 - 1. Be capable of performing pump and piping maintenance required.
 - 2. Be capable of monitoring flows/levels in suction manhole and any upstream manholes to verify system operations.
 - 3. Have cellular phones for communication with the Contractor and the Owner in the event of emergencies.

4. The person responsible for the bypass pumping may perform other construction duties in the immediate vicinity of the bypass pumping system but must not leave the site for any reason without first handing off responsibilities to another competent person. All responsibilities of this specification apply to the new person until relieved.
 5. A list of those responsible for the bypass pumping supervision, and the times they will be onsite, shall be provided to the City and the Engineer.
- C. No bypassing to the ground surface, receiving waters, storm drains, or bypassing which results in soil or groundwater contamination or any potential health hazards shall be permitted.
1. In the event of any wastewater spill, be responsible for the prompt cleanup and disinfecting of the spill as called for in the wastewater bypass pumping plan.
 2. Compensate the Owner for the cost of any fines levied as the result of a spill or unauthorized discharge.
- D. Implement measures to prevent interference between Owner operations and the bypass pumping equipment, pipelines and wastewater.
- E. Take precautions to protect all bypass lines from damage.
1. Clearly identify above ground portions of the bypass lines by flashers, fencing, or other means to warn of their presence.

02553.3.03 FIELD QUALITY CONTROL

- A. Hydrostatic pressure test:
1. Prior to operation, test each section of discharge piping with maximum pressure equal to 2.0 times the maximum operating Pressure.
 2. Conduct test for a duration of 2 hours.
 3. Test using non-potable water.
 4. The line in service after test if the pressure has been maintained and there are no observable leaks.
 5. Notify Engineer at least 48 hours prior to testing.
- B. Inspection:
1. Inspect temporary bypass piping system at a minimum of four times per day.
 2. An attendant/operator shall be present to monitor the operation of the bypass pumps at all times 24 hours per day.

3. Inspection log: Keep at each pumping location.

02553.3.04 CLEAN-UP

- A. The temporary bypass pumping system: Flush, clean and drain prior to dismantling.
- B. Dispose of flushing water in approved manner.
- C. Disturbed areas: Upon completion of bypass pumping operation, clean disturbed areas, restoring to original condition, including pavement and landscape restoration, at least equal to that which existed prior to start of Work.

END OF SECTION

02900.1 DESCRIPTION

This section covers providing materials, equipment and labor necessary for installing topsoil, turf, trees, shrubs, grasses, forbs, field seeding, re-seeding, fertilizer, mulch, and soil amendments.

02900.1.1 RELATED WORK

Not used.

02900.1.2 SUBMITTALS

The Contractor shall submit for approval product data and seed mixtures in accordance with the requirements of Section 01300.

02900.1.3 DEFINITIONS

Not used.

02900.2 MATERIALS**02900.2.1 TOPSOIL**

Topsoil shall be obtained from local sources and shall have similar soil characteristics to those of the soil at the location where it is to be used. Topsoil shall be obtained from well-drained sites where it occurs to a depth of not less than 4 inches, and it shall not be obtained from bogs or marshes. Topsoil shall be fertile, friable, natural loam, reasonably free of subsoil, clay lumps, brush, weeds, litter, roots, stumps, stones larger than 2 inches in any dimension, or any other material which would inhibit the germination of seeds or the growth of the cover crop.

02900.2.2 TURF SEED

If not otherwise required in the Contract Documents, seed for turf sod shall be composed principally of Kentucky bluegrass (*Poa pratensis*), testing 99.9% pure live seed (PLS), or as approved. Other acceptable varieties include Merion, Baron, Fylking, Tall Fescue, and Brome.

02900.2.3 TURF SOD

Turf sod shall be vigorous, viable, strongly rooted sod, not dormant or less than 2 years old, free of weeds, undesirable native grasses, insect infestations, and fungus. It shall be machine cut to a pad thickness of 1 inch (± 0.33 inch).

02900.2.4 TREES AND SHRUBS

02900.2.4.1 NURSERY GROWN - Trees and shrubs shall be nursery-grown, with botanical and common names of plants true to the approved names given in the latest edition of "Hortus" and shall meet the requirements of the American Standard for Nursery Stock adopted by the American Association of Nurserymen. Plants shall be sound, healthy, vigorous, symmetrically proportioned, well branched, densely foliated when in leaf, free of disease, insect pests, eggs, and larvae and shall have well developed root systems.

02900.2.4.2 ROOT BALLS AND PRUNING - Root balls shall be protected at all times from sun, drying winds and frost. Plants shall not be pruned prior to delivery. If balled and burlapped plants are not installed immediately upon delivery, they shall be set on the ground and protected with moist soil or wet mulch.

02900.2.4.3 WARRANTY - Trees and shrubs shall be warranted for a period of 1 year after Substantial Completion, against death and unsatisfactory growth, except in cases resulting from Owner's neglect, abuse by others or natural phenomena. Unacceptable plant material shall be replaced at end of warranty period. Only one replacement is required.

02900.2.4.4 FIELD SEED MIX

The seed mix listed below is suggested as a standard for field seeding when no other information is available. However, seed mix requirements can vary widely from area to area, and the Contractor shall contact the local office of the Natural Resources Conservation Service (NRCS) to obtain an appropriate seed species mix and application rate for the location in question. The Contractor shall follow the directions of the NRCS, the Engineer, and the property owner in doing field seeding.

SUGGESTED FIELD SEED MIX

Species	Amount (%)
Nardan Crested Wheatgrass	30
Russian Wild Rye	20
Y.B. Sweet Clover	15
Slender Wheatgrass	10
Oahe Intermediate Wheatgrass	10
Fairway Crested Wheatgrass	5
Western Wheatgrass	4
Other	6

02900.2.5 RESEEDING AND REVEGETATING

As with the field seed mix, non-field seed mix and/or vegetation requirements are usually area sensitive. Different government agencies, such as the Forest Service or

the Bureau of Land Management, may have separate seed mix and vegetation requirements within the same area. The Contractor shall contact the respective property owner at their local office, address, or telephone number to obtain the appropriate reseeding and revegetating requirements and follow the same, in concurrence with the Engineer, in acquiring the appropriate seed and vegetation.

02900.2.6 MULCH

02900.2.6.1 TREE AND SHRUB MULCH - Tree and shrub mulch shall consist of well-aged fibrous or shredded bark, old sawdust, pine needles or leaf mold.

02900.2.6.2 FIELD SEED MULCH - Field seeding mulch shall be certified weed free small grain straw or native hay.

02900.2.6.3 HYDRAULIC MULCH - Hydraulic seeding mulch shall consist of pigments and wood cellulose fiber or paper pulp and shall form a blotter-like ground cover with moisture absorption and percolation properties. It shall have the ability to cover and hold the seed in contact with the topsoil, yet not inhibit the penetration of seedlings through it.

02900.2.7 DECOMPOSED GRANITE

02900.2.7.1 APPROVALS

All rough and finish grading shall be inspected and approved before start of any work of this section. All irrigation work affecting the work of this section shall be inspected and approved before installation of topping.

02900.2.7.2 PRODUCTS

Decomposed granite shall meet the requirements of Standard Specifications for Public Works Construction, Disintegrated granite, except that grading shall be as follows:

Sieve Size	% Passing
3/8"	100
1/4"	90 - 100
No. 4	50 - 90

02900.2.7.3 SUBMITTALS

Contractor to furnish conformance tests and obtain approval of material prior to delivery.

02900.2.7.4 EXECUTION

APPLICATION - Subcut to 3 inches below finish grade. Maintain uniform subgrade slope to drain. Treat grade area with a non-translocating, pre-emergent herbicide. Decomposed granite shall be evenly distributed on the designated areas to a depth as indicated on the plans and details. Grade to uniform slope. Thoroughly moisten without flooding and compact to minimum 95%.

CLEANING - After placing and grading the granite mulch, the Contractor shall water granite with a light spray to settle the granite and remove fine materials from the surface

MAINTENANCE - Remove all vegetation in areas and in decomposed granite areas as it appears. Contractor may use a contact weed killer that does not stain or leave a residue to control vegetation.

02900.3.1 SCOPE OF REQUIREMENTS

The Contractor shall furnish all equipment, labor, topsoil, seed, seed mixes, turf, shrubs trees or other materials required to landscape, re-seed, or re-vegetate all areas disturbed by the Work, as required by the Drawings and these Specifications. The disturbed area shall be kept as small as possible.

02900.3.2 EROSION CONTROL

The condition of landscaped, re-seeded and re-vegetated areas shall be checked to determine the effectiveness of erosion control methods and materials. Checks will be made upon project completion, at three months following project completion, and at nine months following project completion. Any modifications or repairs required by the Engineer shall be promptly performed by the Contractor, at no additional cost to the Owner.

02900.3.3 TOPSOIL

02900.3.3.1 REMOVAL OF TOPSOIL - Topsoil to be saved shall be carefully removed to a depth of 24 inches, or to the actual depth of the existing layer, which ever is less, and set aside in a separate location. It shall not be mixed with the remainder of excavated material.

02900.3.3.2 REPLACEMENT OF TOPSOIL - When site work conditions permit, topsoil shall be spread as shown on the Drawings. The minimum depth of topsoil shall be 6 inches over all designated areas. Topsoil shall be fine graded to a firm even surface, matching existing slopes, with no lumps or stones present. The topsoil shall be prepared to a good condition, not muddy or hard, and shall be scarified to a friable condition if it is hard before turf is placed.

- 02900.3.3.3 PROTECTION AGAINST EROSION - Areas where topsoil has been spread shall be protected against erosion.
- 02900.3.4 TURF SEED
- 02900.3.4.1 SEEDBED PREPARATION - Where required, turf seed shall be installed as specified herein. Seedbed preparation shall be accomplished by spreading peat moss or manure uniformly at a rate of 3 cubic yards per 1000 square feet and worked into the soil by light tilling.
- 02900.3.4.2 APPLICATION - Seed shall be applied at a rate of 2 pounds per 1000 square feet using a drop (band) type spreader unless otherwise approved by the Engineer. The seed shall be divided into two halves and then distributed, half in north/south directions and half in east/west directions. Seed shall be raked into the soil, a layer of mulch shall be applied, and then lightly watered, at least four times daily for two weeks, or until the seed germinates.
- 02900.3.5 TURF SOD
- 02900.3.5.1 INSTALLATION - Where required, turf sod shall be laid across slopes such that butt joints alternate. Sod pieces shall be fitted tightly together so no joint is visible and then firmly and evenly hand tamped. The sod shall then be rolled with a 150-pound roller to level and seal all seams.
- 02900.3.5.2 WATERING - After rolling, sod shall be watered until water soaks into underlying topsoil to a depth of not more than 3 inches. For grades of 50% slope or steeper, the sod shall be secured with wooden pegs driven flush with the soil portion of the sod and 2 feet maximum on center.
- 02900.3.5.3 MOWING - Prior to Substantial Completion, sod shall be mowed as required to maintain a maximum height of 2 1/2 inches.
- 02900.3.6 TREES AND SHRUBS
- 02900.3.6.1 LOCATION - When required trees and shrubs shall be installed, as specified herein, at locations designated on the Drawings. Trees and shrubs to be saved and replanted shall be carefully removed, set aside, protected and preserved until they can be safely replanted.
- 02900.3.6.2 PREPARATION OF PLANTING PIT - Tree and shrub pits shall be five times the diameter of the root ball. The bed shall be prepared by loosening the soil with a tiller or shovel to a depth of 12 inches. Topsoil and organic matter shall then be added and distributed uniformly within the planting bed as necessary. The Contractor shall not proceed with planting until the pit locations and bedding are approved by the Engineer.

- 02900.3.6.3 PLANTING - The plant shall be set in the center of a hole of the proper size, plumb and straight. Burlap, ropes and all wire and other materials shall be removed, and then the excavated soil shall be returned to the hole and gently packed around the root ball. The planting shall be flooded with water to promote additional soil consolidation. The Contractor shall give care that, after settling, the top of the root collar shall be even with the adjacent finished grade. A 2-inch layer of mulch shall be applied around the base of the tree, to extend 2 feet in radius beyond the root ball.
- 02900.3.6.4 SUPPORT - Trees shall be guyed with two wires anchored securely to steel posts not less than 5 feet from the trunk, and directly opposite each other. The trees shall be protected from direct contact with the wires.
- 02900.3.6.5 PRUNING - Each plant shall be pruned with clean, sharp tools, to remove suckers and broken, badly bruised or dead branches. Tree trunks shall be wrapped with Tubex or equivalent translucent material unless directed otherwise by the Engineer.
- 02900.3.6.6 WATERING - Trees and shrubs shall be watered and maintained until Substantial Completion and defective work shall be corrected as soon as it becomes apparent and as weather and season permit.
- 02900.3.7 FIELD SEEDING
- Field seeding shall be accomplished using one of the following methods.
- 02900.3.7.1 BROADCAST - Broadcast seeding shall only be applied after October 15 and prior to April 15, unless authorized otherwise and directed in writing by the Engineer. No seed bed preparation will be required for this seeding method.
- 02900.3.7.2 DRILLING - Drilling shall be set forth in uniform rows with spacing not to exceed 8 inches and the depth set correctly for the type of seed being drilled. The minimum distribution rate shall be 20 pounds per acre and may be more if so recommended by the local Soil Conservation Service.
- 02900.3.7.3 HYDRAULIC - For hydraulic seeding the Contractor shall use equipment designed for such work. Seed and water shall be uniformly applied to the areas scheduled to be seeded. Fertilizer, water and approximately 1 ton per acre of hydraulic mulch shall be homogeneously mixed and uniformly applied to seeded areas.
- 02900.3.8 RESEEDING AND RE-VEGETATING
- 02900.3.8.1 RE-SEEDING - Reseeding of areas disturbed by the Work shall be accomplished with grasses compatible with the pre-construction vegetation. The Contractor shall consult the local office of the U.S. Forest Service, Bureau or Land Management, Soil Conservation Service, or other applicable affected agency, for appropriate seed species and application rates. Unless otherwise directed by the Engineer or these Specifications, reseeding shall be accomplished by broadcast seeding in accordance with this section.

02900.3.8.2 RE-VEGETATING - Re-vegetation of areas disturbed by the Work shall be accomplished with started trees and shrubs, compatible with the pre-construction vegetation, and is performed in addition to reseeded as discussed in paragraph 02900.3.8.1 above. When re-vegetation is required, the Contractor shall consult the local office of the applicable affected agency, for appropriate species and instructions.

02900.3.9 MULCH

Mulch shall be incorporated as prescribed on the Drawings and in these Specifications. Where the slope exceeds 10%, the Contractor shall use a tie down mulching material.

02900.4 METHOD OF MEASUREMENT

02900.4.1 LUMP SUM - Lump sum measurement for landscaping shall include all grading, soil preparation, planting, furnishing materials and plants in accordance with the Drawings and these Specifications when shown as a single item in the Bid Schedule.

02900.4.2 SEPARATE MEASUREMENT - When and if applicable, separate measurements for topsoil, turf seeding, turf sod laying, reseeded, re-vegetating, mulching and planting of trees and shrubs shall be made in the units shown and as identified in the Bid Schedule.

02900.5 BASIS OF PAYMENT

The accepted quantity(s) shall be paid for at the contract unit price for:

PAY ITEM	UNIT
Landscaping	Lump Sum
Topsoil	Square Yard
Turf, Seed	Square Foot
Turf Sod	Square Foot
Trees & Shrubs	Each
Field Seeding	Acre
Re-seeding	Acre
Mulch	Acre

END OF SECTION

02920 DEMOLITION AND REMOVAL**02920.1 DESCRIPTION**

This section is a specification regarding the demolition, removal or abandonment of existing equipment, structures, piping, fencing and appurtenances.

02920.1.1 REFERENCES

Section 01520 – Environmental Control
MAG Section 601 – Trench Excavation, Backfill and Compaction

02920.1.2 Definitions

Not used.

02920.2 REMOVAL/ABANDONMENT OF PIPING

Pipe removal/abandonment shall be in accordance with these Specifications and the Drawings. All above ground pipe to be abandoned shall be removed. All below ground piping shall be grouted and abandoned in place, unless the piping must be removed for construction of new piping or structures, or if piping is fully exposed during the course of construction and is easily removable. Removal and abandonment of piping includes all fittings, restraints, and appurtenances. All removed piping, unless stated otherwise in the Drawings or by the Engineer shall be disposed of according to Section 01520.

02920.3 REMOVAL OF STRUCTURES AND PADS

All concrete structures and pads shall be removed according to the Drawings and these Specifications. Concrete shall be broken up and removed with appropriate equipment to complete the task in a timely manner. Dust shall be controlled during and after removal and debris barriers shall be set up if deemed necessary by the Contractor or Engineer to protect existing structures and workers. Concrete debris shall be neatly stockpiled and disposed of according to Section 01520.

02920.4 REMOVAL OF EXISTING WALLS

02920.4.1 Existing walls shall be removed according to the Drawings and these specifications. The wall and footing shall be broken up and removed with appropriate equipment to complete the task in a timely manner. Dust shall be controlled during and after removal and debris barriers shall be set up if deemed necessary by the Contractor or Engineer to protect existing structures and workers. Care shall be taken to not damage the wall/footing that is not removed. The walls shall be reinstalled in kind. Concrete debris shall be neatly stockpiled and disposed of according to Section 01520.

02920.5 EARTHWORK

Upon completion of removal or abandonment activities soils shall match grading called out in the Drawings. Backfill and compaction shall be completed in accordance with the Drawings and these Specifications.

02920.6 REMOVAL/ABANDONMENT ACTIVITIES CLEANUP

Upon completion of removal or abandonment activities the areas shall be free of debris. Area shall match surrounding areas.

02920.7 METHOD OF MEASUREMENT

02920.7.1 The method of measurement shall be per Section 01019.3.

02920.7.2 DAMAGED ITEMS

Measurement of items damaged or removed as a result of the Contractor's negligence shall not be allowed and no payment will be made under this contract.

02920.8 BASIS OF PAYMENT

The basis of payment shall be per Section 01019.3.

END OF SECTION

02930.1 DESCRIPTION

This section describes the minimum requirements for maintenance of plant operation (MOPO) during construction until the new sewer line is brought online. The purpose of this MOPO is to ensure continued service by:

1. Keeping the existing sewer line online as long as feasibly possible during construction;
2. Switches to temporary bypass pumping once existing system must be taken offline;
3. Bring the new sewer line online.

A full MOPO plan addressing the above items is the responsibility of the Contractor. The Contractor is responsible for providing all equipment and personnel unless stated otherwise in these specifications.

02930.1.1 RELATED WORK AND REFERENCED SECTIONS

Section 01019 – Measurement and Payment
Section 01300 – Submittals
Section 01510 – Protection of Existing Property
Section 01520 – Environmental Control

02930.1.2 SUBMITTALS

- 02930.1.2.1 A PDF copy of the MOPO must be provided to the Owner and Engineer three (3) weeks before the scheduled work for approval. The MOPO must be approved before work begins. The MOPO must describe in detail how the Contractor will approach construction to ensure the existing system is kept online as long as possible, how the system will transition to bypass pumping, and how the new system will be brought online once complete. A schedule shall be provided that shows when the events will occur. If the MOPO is not approved, it will be the Contractors responsibility to provide an alternative MOPO at no additional cost to the Owner.

02930.2 MOPO REQUIREMENTS**02930.2.1 Keeping Existing Sewer Line Online During Construction:**

It is the contractor's responsibility to stage construction in order to keep the existing system online for as long as feasible. Work that can be done without impacting the existing sewer line shall be done first when reasonable. Existing sewer line, piping and electrical crucial to the system operation shall be protected in place until the sewer line is switched over to temporary bypass pumping.

02930.2.2 Temporary Bypass Pumping:

Once it is no longer feasible to keep the existing sewer line online, the Contractor shall switch over to a temporary bypass pumping system. The Contractor to provide a detail

plan on how the system will be switched over from the existing sewer line to the temporary bypass pumping system. The temporary bypass pumping system shall be per Specification Section 02553. Switching of the systems shall be during a low flow period at a time approved by the City.

02930.2.3 **Bring New Sewer Line Online:**

Once the new sewer line has been constructed, tested, and approved by the City, it will be brought online, and the temporary bypass pumping system will be discontinued. The Contractor is responsible for providing a detail plan on how the switch between the temporary bypass system and the new sewer line will occur. Plan shall include the reconnection of all required lines. Switching of the systems shall be during a low flow period at a time approved by the City.

02930.2.5 **MOPO Supervision** – The Contractor shall be responsible for providing supervision over the MOPO where required. The person in charge of the supervision must be competent and responsible. During working and nonworking hours, one person must be in charge of monitoring the MOPO at all times, where required. This person may perform other construction duties in the immediate vicinity of but must not leave the site for any reason during the MOPO activities. If the person must leave the vicinity they must first handoff the MOPO supervision to another individual with all aspects of this specification applying to the new person. A list of those responsible for the MOPO supervision, and the times they will be onsite, shall be provided to the Owner and Engineer.

02930.2.6 **MOPO Duration** – The MOPO shall be in place during the duration of construction until the new sewer line is successfully brought online. It is the Contractors responsibility to meet these specifications throughout the duration of the MOPO.

02930.2.7 **MOPO Implementation** – It is solely the responsibility of the Contractor to implement the MOPO successfully throughout the course of construction. If at any point there is an issue with the MOPO, or alternation to the plan is required, all cost associated with meeting the intent of the MOPO is the responsibility of the Contractor.

02930.4 METHOD OF MEASUREMENT

The method of measurement shall be per Section 01019.3.

02930.5 BASIS OF PAYMENT

The basis of payment shall be per Section 01019.3.

END OF SECTION

09910.1 DESCRIPTION

This specification covers protective coatings intended for use in existing sanitary sewer manholes, where corrosion resistance is required. Concrete sewer manholes shall be 100 percent coated with a protective coating as outlined in this specification.

09910.1.1 RELATED WORK

Not used.

09910.1.2 SUBMITTALS - The following items shall be submitted:

09910.1.2.1 Technical data sheet on each product used, including ASTM test results indicating the product conforms to and is suitable for its intended use per these specifications.

09910.1.2.2 Material Safety Data Sheets (MSDS) for each product used

09910.1.2.3 Project specific guidelines and recommendations.

09910.1.2.4 Qualification of the Contractor for the product used.

The coating applicator shall be an Arizona licensed contractor with an AE license or equivalent

Current documentation from the coating product manufacturer certifying

Contractor's training and equipment complies with the Quality

Assurance requirements specified by the Town shall be submitted by the Contractor.

Contractor shall follow all requirements and recommendation from the manufacturer of the product is being used. This does not relieve the Contractor from any obligation assumed under any other provision of this contract.

09910.1.2.5 Evidence of the required Five (5) Year Bond.

The Contractor shall provide a Five (5) Year Bond, payable to the City of Sedona against defects or failure in materials and workmanship from the date of Final Acceptance by the City. The Bond amount shall cover both material and labor cost associated with applying an approved coating per manufacturer's requirements. Contractor shall, within a reasonable time after written notice from the City, repair defects or failures in materials or workmanship which may develop during the Five (5) Year Bond period at his own expense and at no cost to the City.

The definition of coating failure is that blistering, cracking, becoming brittle or softening of the coating is starting to occur, failure of the bond to the concrete surface or failing the Holiday (Spark) Testing

9910.2 QUALITY ASSURANCE

Repair products shall be fully compatible with coating product including ability to bond effectively forming a composite system.

Contractor shall utilize equipment for the application of the coating product which has been approved by the coating product manufacturer and shall have received training on the operation and maintenance of said equipment and certified by the manufacturer.

Contractor shall initiate and enforce quality control procedures consistent with the coating product manufacturer's recommendations and applicable NACE or SSPC standards and OSHA regulations.

The contractor is responsible to follow all recommendations of the manufacturer on product delivery, handling, storage and application.

9910.2 SURFACE PREPARATION - All exposed metal inside the manhole shall receive an SSPC-SP5 White Metal Blast Cleaning and coated with an approved protective coating. Application equipment shall be specifically designed and approved by the manufacturer of the coating used, and Contractor shall be certified on this equipment for applying. Surface preparation should be performed as follows.

Remove existing coatings prior to application of the new coating. All waste material generated during surface preparation is the responsibility of the Contractor for proper handling and disposal.

All concrete or mortar that is not sound or has been damaged by chemical exposure shall be removed and repaired to a sound concrete surface.

Surfaces to receive protective coating shall be cleaned with a high pressure water cleaning system using 5,000 psi at four (4) gpm. If necessary, detergent water and hot water blasting will be used to remove oils, grease or other hydrocarbon residues from the concrete to provide a uniform, clean neutralized surface that is not excessively damaged.

All surfaces shall be repaired as required by the protective coating system manufacturer requirements used.

In no event shall debris or material removed from the manhole surface be allowed into the sanitary sewer system.

An epoxy primer/sealer coat shall be applied to all surfaces after preparation work is completed prior to protective coating being applied.

9910.4 APPLICATION OF REPAIR MATERIALS - Application of the protective coating shall be per the manufacturer's recommendations and to the satisfaction of the Owner.

Areas where structural steel has been exposed or removed shall be repaired in accordance with the Engineer's recommendations.

The repair materials shall be trowel applied utilizing the proper equipment to the thickness specified by the Engineer.

If using a cementitious repair material, such shall be troweled to provide a smooth surface with an average profile equivalent to coarse sandpaper. No bug holes or honeycomb surfaces should remain after the final trowel procedure.

The repair materials shall be permitted to cure according to the manufacturer's recommendations. All materials must be approved for the specific coating system used.

All surfaces should be inspected by the Inspector prior to coating.

9910.5 TESTING

Wet Film Testing - Wet Film Testing shall be done during application in accordance with ASTM D4414-Standard Practice for Measurement of Wet Film Thickness of Organic Coatings by Notched Gages. Measurements shall be taken, documented, and attested to by the Contractor for submission to the City.

Holiday Testing - Holiday (spark) Testing shall be in accordance with NACE RPO 188-99 after the coating has set in accordance with the manufacturer's instructions. All coated surfaces shall be tested for holidays with high-voltage detection equipment. All detected holidays shall be marked and repaired abrading the coating surface with grit disk paper, or similar tooling method, cleaned properly and recoated. Hand application is allowed following the manufacturer's coating instructions. Documentation is required by the Inspector that they were present for, and all repairs have passed retesting.

Adhesion Testing - Adhesion (pull-strength) Testing, when required, is a destructive test method and will be used to test about 10 percent of the manholes selected by the Inspector. Testing shall be done in accordance with ASTM D4541-Pull-Off Strength of Coatings Using a Portable Adhesion Tester as modified herein. Three (3) 20 mm dollies shall be affixed to the coated surface at the cone area, mid-section and lower section of the manhole. The adhesive used to attach the dollies to the coating shall be rapid setting with tensile strength in excess of the coating product and permitted to cure in accordance with manufacturer's recommendations. Failure of the dolly adhesive shall be deemed a non-test and retested. Two of the three pulls shall exceed 200 psi. Any area detected to have inadequate bond strength shall be evaluated by the Town's Engineer, and further bond testing may be required. Subsequently, Holiday Testing shall be conducted in manholes where Adhesion Testing is performed. A visual inspection shall be made by the Inspector before final

approval will be granted. This is to verify the manhole has been cleaned after all work was performed and is free of related materials, before giving the Final Acceptance Letter.

9910.5.1 **APPROVED PRODUCTS** - Concrete manholes shall use one of the following protective coatings:

Brand	Model No.	Location
Sauereisen Sewergard	N-210	Pittsburg, PA
Sewer Shield	150	Mesa, AZ
Raven Lining System	405	Tulsa, OK

09910.7 METHOD OF MEASUREMENT

09910.7.1 NO MEASUREMENT

Separate measurement for coating will not be made when coating is included as part of an item, building or structure listed in the Bid Schedule.

09910.8 BASIS OF PAYMENT

When coating is included as part of the measurement of another item, structure or building listed in the Bid Schedule, separate payment will not be made.

END OF SECTION